

# Prevalence of Hypercortisolism in Individuals With Resistant Hypertension and Cardiovascular Disease

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## SUMMARY AND CONCLUSIONS

- MOMENTUM**, the largest study assessing the prevalence of endogenous hypercortisolism (HC) in individuals with resistant hypertension (rHTN), found an HC prevalence of 27.3%
- HC prevalence was numerically higher in participants with certain cardiovascular disorders, including heart failure and coronary artery disease
- HC was associated with markers of kidney and liver disease, including estimated glomerular filtration rate <45 mL/min/1.73 m<sup>2</sup> and increasing liver fibrosis severity
- These findings suggest that HC is an underrecognized contributor to rHTN, is associated with a worse cardio-kidney-metabolic profile, and should be considered in the evaluation of all individuals with rHTN
- All relevant medical societies should include screening for HC in their guidelines for rHTN

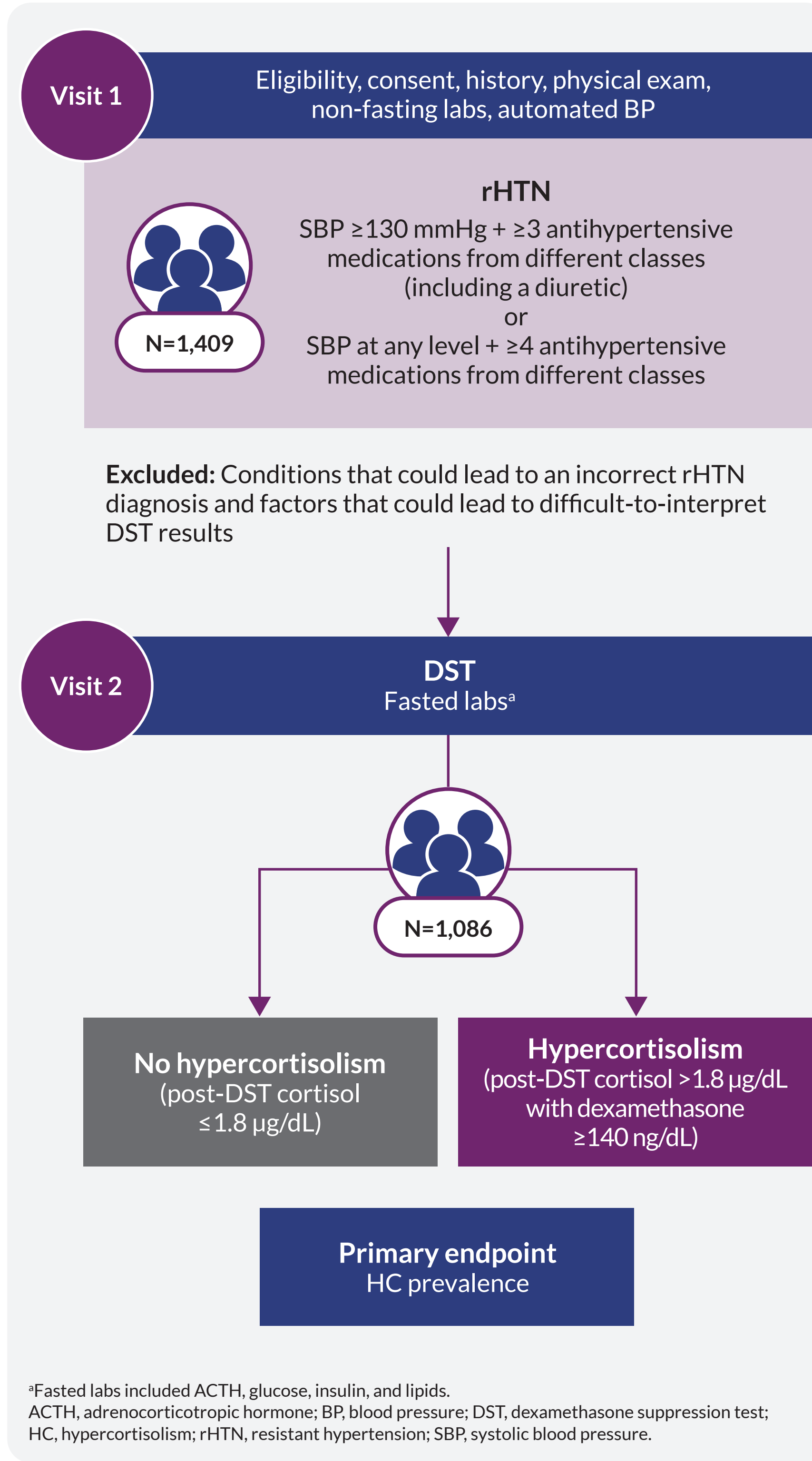
## BACKGROUND AND OBJECTIVE

- Resistant hypertension (rHTN) confers a markedly increased risk of cardiovascular disease and associated morbidities and mortality<sup>1-3</sup>
- Hyperaldosteronism and endogenous hypercortisolism (HC) have been underdiagnosed secondary endocrine contributors to rHTN<sup>3</sup>
  - The 2025 American Heart Association (AHA) hypertension guidelines now recognize the high prevalence of hyperaldosteronism in this population and recommend screening for hyperaldosteronism in all individuals with rHTN<sup>3</sup>
  - However, HC is not similarly recognized and continues to be considered an uncommon contributor to rHTN<sup>2,3</sup>
- The MOMENTUM study (NCT06829537) assessed the prevalence of HC in a US population with rHTN. Here, we present results from the subgroup of individuals diagnosed with cardiovascular disorders

## METHODS

- MOMENTUM was a prospective, multicenter, observational study conducted in the US that screened adults ≥18 years with rHTN per AHA criteria for HC (Figure 1)<sup>4</sup>

Figure 1. MOMENTUM Study Schema



- HC was determined using the 1-mg overnight dexamethasone suppression test (DST), the most sensitive test to screen for HC of any etiology<sup>5,6</sup>
  - HC was defined as cortisol levels >1.8 µg/dL with serum dexamethasone levels ≥140 ng/dL
- Key exclusion criteria aimed to minimize incorrect rHTN diagnosis and factors that could lead to difficult-to-interpret DST results, including:
  - Investigator-determined white coat hypertension and/or nonadherence to blood pressure medications
  - Systemic glucocorticoid exposure ≤3 months before screening; estimated glomerular filtration rate (eGFR) <30 mL/min/1.73 m<sup>2</sup>; severe acute psychiatric, medical, or surgical illness; excessive alcohol consumption; pregnancy or lactation; oral contraceptive use; and/or severe untreated sleep apnea
- The cardiovascular disorders subgroup included participants who had a diagnosis of cardiovascular disease (other than hypertension) in their medical history

## RESULTS

- Baseline demographics were broadly similar between participants with and without HC, both in the overall population and among participants diagnosed with cardiovascular disorders (Table 1)
- Compared with the overall population, the cardiovascular disorders subgroup had a lower percentage of female participants and lower baseline blood pressure and mean eGFR, both in participants with and without HC

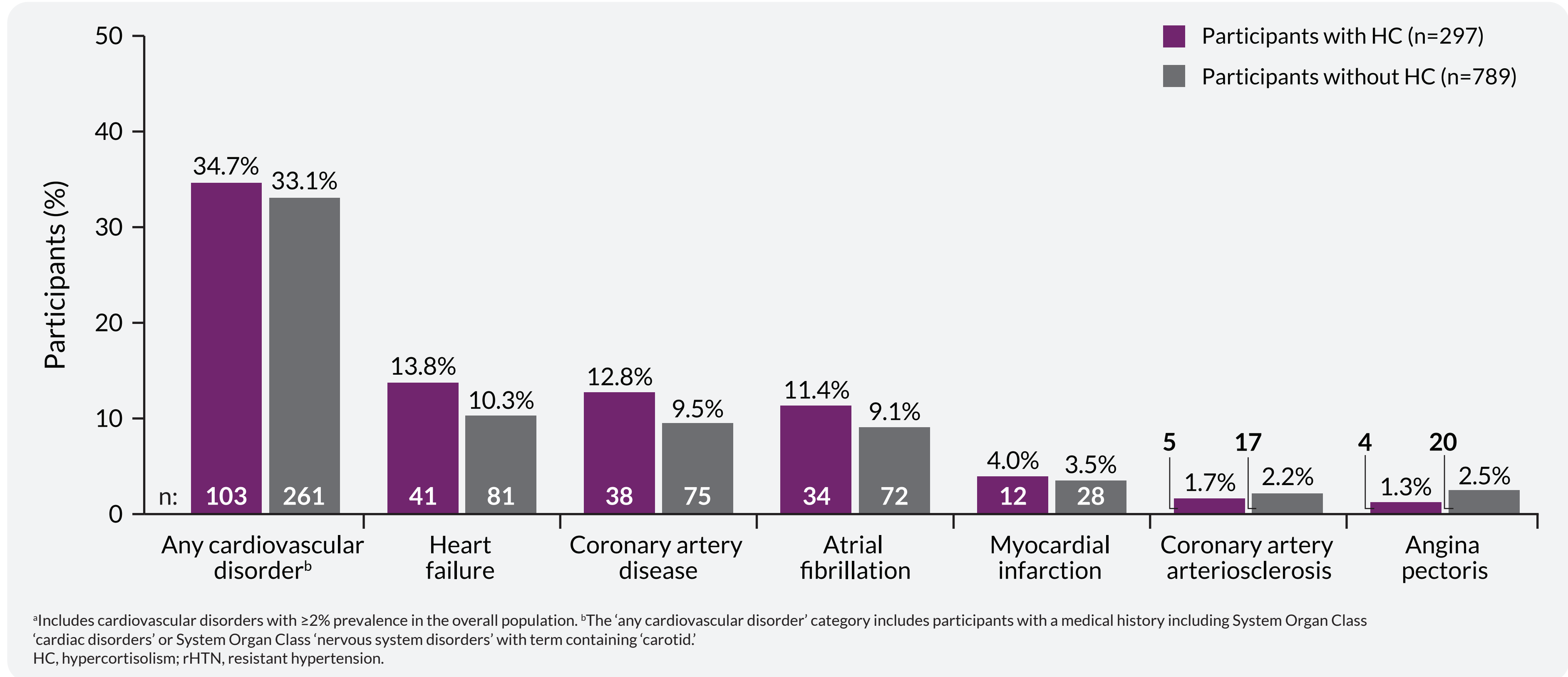
Table 1. Baseline Demographics and Clinical Characteristics

|                                              | Overall Population (N=1,086)     |                                     | Cardiovascular Disorders Subgroup <sup>b</sup> (n=364) |                                     |
|----------------------------------------------|----------------------------------|-------------------------------------|--------------------------------------------------------|-------------------------------------|
|                                              | Post-DST >1.8 µg/dL (HC) (n=297) | Post-DST ≤1.8 µg/dL (no HC) (n=789) | Post-DST >1.8 µg/dL (HC) (n=103)                       | Post-DST ≤1.8 µg/dL (no HC) (n=261) |
| <b>Demographics</b>                          |                                  |                                     |                                                        |                                     |
| Age, years, mean (SD)                        | 66.2 (10.2)                      | 65.0 (10.9)                         | 69.5 (9.2)                                             | 66.8 (10.7)                         |
| Female, n (%)                                | 130 (43.8)                       | 425 (53.9)                          | 34 (33.0)                                              | 115 (44.1)                          |
| Race, n (%)                                  |                                  |                                     |                                                        |                                     |
| White                                        | 170 (57.2)                       | 450 (57.0)                          | 65 (63.1)                                              | 163 (62.5)                          |
| Black or African American                    | 109 (36.7)                       | 287 (36.4)                          | 27 (26.2)                                              | 74 (28.4)                           |
| Asian                                        | 12 (4.0)                         | 23 (2.9)                            | 7 (6.8)                                                | 10 (3.8)                            |
| Other                                        | 6 (2.0)                          | 29 (3.7)                            | 4 (3.9)                                                | 14 (5.4)                            |
| Ethnicity, n (%)                             |                                  |                                     |                                                        |                                     |
| Hispanic/Latino                              | 75 (25.3)                        | 210 (26.6)                          | 15 (14.6)                                              | 53 (20.3)                           |
| Non-Hispanic/Latino                          | 219 (73.7)                       | 576 (73.0)                          | 86 (83.5)                                              | 208 (79.7)                          |
| Missing <sup>a</sup>                         | 3 (1.0)                          | 3 (0.4)                             | 2 (1.9)                                                | 0                                   |
| <b>Clinical Characteristics</b>              |                                  |                                     |                                                        |                                     |
| BMI, kg/m <sup>2</sup> , mean (SD)           | 32.0 (6.9)                       | 33.5 (7.1)                          | 31.4 (6.5)                                             | 33.6 (6.8)                          |
| Waist circumference, cm, mean (SD)           | 106.9 (18.0)                     | 109.3 (17.0)                        | 107.3 (17.8)                                           | 113.4 (17.0)                        |
| SBP, mmHg, mean (SD)                         | 141.3 (18.3)                     | 140.2 (17.5)                        | 136.7 (19.8)                                           | 137.2 (18.6)                        |
| DBP, mmHg, mean (SD)                         | 84.4 (13.1)                      | 83.9 (12.3)                         | 79.2 (12.8)                                            | 81.5 (12.8)                         |
| eGFR, mL/min/1.73 m <sup>2</sup> , mean (SD) | 63.8 (23.5)                      | 71.9 (20.6)                         | 56.4 (18.6)                                            | 68.1 (21.9)                         |
| APRI, mean (SD) [n]                          | 0.2 (0.2) [287]                  | 0.2 (0.1) [763]                     | 0.2 (0.2) [102]                                        | 0.2 (0.1) [251]                     |
| FIB-4, mean (SD) [n]                         | 1.5 (0.8) [287]                  | 1.4 (0.7) [763]                     | 1.6 (0.7) [102]                                        | 1.5 (0.6) [251]                     |

<sup>a</sup>The 'Missing' category comprises not reported and unknown. <sup>b</sup>The 'cardiovascular disorders' subgroup includes participants with a medical history including System Organ Class 'cardiac disorders' or System Organ Class 'nervous system disorders' with term containing 'carotid'. APRI, aspartate aminotransferase-to-platelet-ratio index; BMI, body mass index; DBP, diastolic blood pressure; DST, dexamethasone suppression test; eGFR, estimated glomerular filtration rate; FIB-4, fibrosis-4 index; HC, hypercortisolism; SBP, systolic blood pressure; SD, standard deviation.

- In the overall population, the frequency of heart failure, coronary artery disease, and atrial fibrillation was numerically higher in participants with HC than in those without HC (Figure 2)

Figure 2. Frequency of Diagnosed Cardiovascular Disorders<sup>a</sup> Among Participants With rHTN, With or Without HC



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## Presenter Disclosure

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