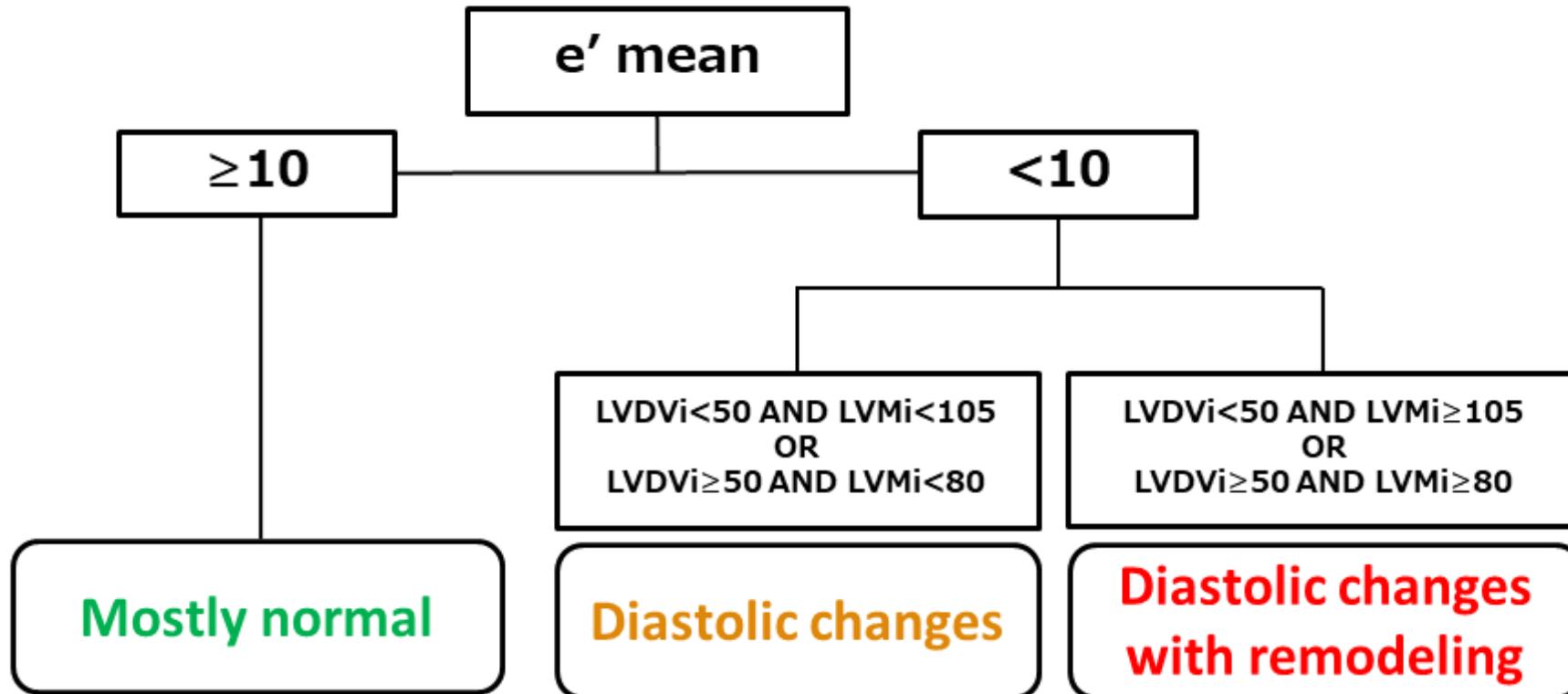


Supplemental Figure 1. e'VM algorithm



Supplemental Table 1. Age-specific limits for e' mean, LVEDVi and LVMi

| | e' mean (cm/sec) | LVEDVi (ml/m²) | LVMi (g/m²) | LVMi2 (g/m²) |
|-----------------------------|-----------------------------|--------------------------------------|-----------------------------------|------------------------------------|
| 40 years | 12 | 56 | 72 | 97 |
| 50 years | 11 | 53 | 76 | 101 |
| 60 years (reference) | 10 | 50 | 80 | 105 |
| 70 years | 9 | 47 | 84 | 109 |
| 80 years | 8 | 44 | 88 | 113 |

Reference limits at 60 years of age were defined by original thresholds of the e'VM algorithm, while age-specific cut-off values were determined according to previous reports^{16, 17}.

Supplemental Table 2. Change in echocardiographic and biomarker variables in response to spironolactone across the e'VM phenotype strata

| | MN phenotype | | | | D phenotype | | | | D/S phenotype | | | |
|---|------------------|------------------|------------------|--------------|-------------------|-------------------|------------------|--------------|-------------------|-------------------|-------------------|------------------|
| | Spironolactone | placebo | mean \pm SD | adj-p | Spironolactone | placebo | mean \pm SD | adj-p | Spironolactone | placebo | mean \pm SD | adj-p |
| LVEDVi change, ml/m² | -0.6 \pm 5.5 | -1.0 \pm 5.2 | 0.4 \pm 1.5 | 0.87 | -1.2 \pm 4.5 | -1.0 \pm 4.4 | -0.2 \pm 0.6 | 0.95 | -1.8 \pm 5.2 | -1.6 \pm 5.3 | -0.4 \pm 0.9 | 0.71 |
| LVMi change, g/m² | -0.7 \pm 15.4 | 0.1 \pm 9.6 | -0.4 \pm 3.4 | 0.65 | -0.5 \pm 8.9 | 0.7 \pm 10.4 | -1.2 \pm 1.4 | 0.32 | -6.7 \pm 13.9 | -0.9 \pm 14.7 | -6.4 \pm 2.7 | 0.012 |
| LAVi change, ml/m² | -3.3 \pm 8.4 | -1.2 \pm 4.6 | -1.8 \pm 1.6 | 0.29 | -1.0 \pm 5.0 | -0.9 \pm 6.2 | -0.2 \pm 0.7 | 0.70 | -2.1 \pm 5.2 | -0.0 \pm 5.3 | -2.3 \pm 1 | 0.028 |
| E/e' change, /unit | 0.1 \pm 2.2 | 0.9 \pm 1.5 | -0.7 \pm 0.5 | 0.04 | -0.3 \pm 2.1 | -0.4 \pm 2.4 | 0.2 \pm 0.3 | 0.70 | -1.0 \pm 2.5 | 0.0 \pm 3.2 | -1.5 \pm 0.5 | 0.004 |
| SBP change, mmHg | -9.1 \pm 15.4 | 0.2 \pm 14.3 | -12.2 \pm 3.1 | 0.002 | -13.0 \pm 19.8 | -3.5 \pm 18.5 | -8.3 \pm 2.2 | 0.002 | -15.9 \pm 17.0 | -7.0 \pm 21.8 | -10.7 \pm 3 | <0.001 |
| PIIINP change, μg/L | -0.1 \pm 2.2 | -0.2 \pm 1.4 | 0.1 \pm 0.5 | 0.63 | -0.0 \pm 1.7 | -0.3 \pm 1.7 | 0 \pm 0.2 | 0.93 | -0.2 \pm 1.7 | -0.3 \pm 2.3 | -0.2 \pm 0.3 | 0.45 |
| PICP change, μg/L | -9.0 \pm 24.8 | 1.5 \pm 19.6 | -6.9 \pm 4.6 | 0.12 | -6.6 \pm 26.5 | -1.9 \pm 18.5 | -6.3 \pm 3 | 0.032 | -9.9 \pm 22.9 | 0.2 \pm 26.3 | -12.6 \pm 4 | 0.003 |
| NTproBNP change, μg/L | -8.0 \pm 179.3 | 68.5 \pm 202.5 | -23.5 \pm 49.3 | 0.64 | -25.4 \pm 163.5 | -10.4 \pm 196.9 | -17.9 \pm 21.9 | 0.33 | -18.9 \pm 155.4 | 119.3 \pm 613.6 | -134.2 \pm 84.9 | 0.06 |
| BNP change | -0.1 \pm 1.2 | 0.5 \pm 1.1 | -0.4 \pm 0.3 | 0.15 | -0.0 \pm 1.0 | -0.1 \pm 0.9 | 0 \pm 0.1 | 0.67 | -0.3 \pm 1.0 | 0.3 \pm 1.0 | -0.6 \pm 0.2 | 0.002 |

* Adjusted for age, sex, body mass index, a prevalence of hypertension, diabetes mellitus, glomerular filtration rate and baseline echocardiographic/proteomic variables.

**Echocardiographic and biomarker variables were assessed by changes from baseline to month 9.