| Factors                              | No-frailty (n=1001) | Prefrailty (n=442) | Frailty (n=84) | P-value |
|-------------------------------------|---------------------|--------------------|----------------|---------|
| Age (years), median [Q1-Q3]         | 70[64-77]           | 70[65-78]          | 70[65-78]     | 0.204   |
| Male, n (%)                         | 552 (55.1)          | 170 (38.5)         | 44 (51.2)     | <0.001  |
| Race/ethnicity, n (%)               |                     |                    |               | <0.001  |
| Mexican American                    | 231 (23.1)          | 123 (27.8)         | 26 (30.2)     |         |
| Other Hispanic                      | 47 (4.7)            | 24 (5.4)           | 7 (8.1)       |         |
| Non-Hispanic white                  | 554 (55.3)          | 195 (44.1)         | 33 (38.4)     |         |
| Non-Hispanic Black                  | 153 (15.3)          | 84 (19.0)          | 20 (23.3)     |         |
| Other race                          | 16 (1.6)            | 16 (3.6)           | 0 (0)         |         |
| Education level, n (%)              |                     |                    |               | <0.001  |
| Less than high school               | 449 (44.9)          | 252 (57.0)         | 62 (72.1)     |         |
| High school                         | 240 (24.0)          | 90 (20.4)          | 10 (11.6)     |         |
| More than high school               | 312 (31.2)          | 100 (22.6)         | 14 (16.3)     |         |
| SBP (mmHg), median [Q1-Q3]          | 140[128-155]        | 139[127-158]       | 134[118-158]  | 0.226   |
| SBP categories, n (%)               |                     |                    |               | 0.004   |
| <110mmHg                            | 52 (5.2)            | 24 (5.4)           | 10 (11.6)     |         |
| 110-130mmHg                         | 220 (22.0)          | 110 (24.9)         | 30 (34.9)     |         |
| 130-150mmHg                         | 391 (39.1)          | 148 (33.5)         | 17 (19.8)     |         |
| 150-170mmHg                         | 216 (21.6)          | 99 (22.4)          | 17 (19.8)     |         |
| ≥170mmHg                            | 122 (12.2)          | 61 (13.8)          | 12 (14.0)     |         |
| DBP (mmHg), median [Q1-Q3]          | 72[64-79]           | 71[63-77]          | 69[63-77]     | 0.050   |
| DBP categories, n (%)               |                     |                    |               | 0.128   |
| <60mmHg                             | 152 (15.2)          | 77 (17.4)          | 15 (17.4)     |         |
| 60-70mmHg                           | 271 (27.1)          | 120 (27.1)         | 29 (33.7)     |         |
| 70-80mmHg                           | 338 (33.8)          | 169 (38.2)         | 23 (26.7)     |         |
| 80-90mmHg                           | 169 (16.9)          | 56 (12.7)          | 14 (16.3)     |         |
| ≥90mmHg                             | 71 (7.1)            | 20 (4.5)           | 5 (5.8)       |         |
| Comorbidities, n (%)                |                     |                    |               | <0.001  |
| Diabetes                            | 155 (15.5)          | 93 (21.0)          | 38 (44.2)     |         |
| Hyperlipidemia                      | 455 (45.5)          | 212 (52.0)         | 40 (46.5)     | 0.677   |
| COPD                                | 39 (3.9)            | 53 (12.0)          | 13 (15.1)     | <0.001  |
| Stroke                              | 57 (5.7)            | 39 (8.8)           | 20 (23.3)     | <0.001  |
| CAD                                 | 68 (6.8)            | 57 (12.9)          | 17 (19.8)     | <0.001  |
| Asthma                              | 79 (7.9)            | 62 (14.0)          | 9 (10.5)      | 0.001   |
| Cancer                              | 153 (15.3)          | 78 (17.6)          | 10 (11.6)     | 0.292   |
| Thyroid disease                     | 619 (61.8)          | 316 (71.5)         | 60 (69.8)     | 0.001   |
| CKD                                 | 2 (0.2)             | 5 (1.1)            | 0 (0)         | 0.044   |
| Smoker, n (%)                       | 508 (50.7)          | 234 (52.9)         | 53 (61.6)     | 0.137   |
| Alcohol user, n (%)                 | 626 (62.5)          | 240 (54.3)         | 53 (61.6)     | 0.012   |
| Antihypertensive medication, n (%)  | 888 (88.7)          | 425 (96.2)         | 81 (94.2)     | <0.001  |
| Mortality, n (%)                    |                     |                    |               |         |
Table S2. Cox regression analyses of all-cause mortality for SBP in (pre)frail and non-frail people

| Categories                        | Deaths/All individuals | Unadjusted model | Adjusted model |
|-----------------------------------|------------------------|-----------------|----------------|
|                                   |                        | HR (95%CI)       | P-value        |
| Age (years)                       |                        | 1.09[1.08-1.10]  | <0.001         |
| Gender                            |                        |                 |                |
| Male                              | 478/766                | Ref.            | Ref.           |
| Female                            | 399/763                | 0.75[0.65-0.85]  | <0.001         |
| Race                              |                        |                 |                |
| Mexican American                  | 185/380                | Ref.            | Ref.           |
| Other Hispanic                    | 31/78                  | 0.80[0.54-1.17]  | 0.241          |
| Non-Hispanic white                | 488/782                | 1.45[1.22-1.72]  | <0.001         |
| Non-Hispanic Black                | 155/257                | 1.37[1.11-1.70]  | 0.004          |
| Other race                        | 18/32                  | 1.22[0.75-1.97]  | 0.428          |
| Diabetes                          |                        |                 |                |
| Yes                               | 192/286                | 1.40[1.20-1.65]  | <0.001         |
| No                                | 685/1243               | Ref.            | Ref.           |
| Stroke                            |                        |                 |                |
| Yes                               | 93/116                 | 2.10[1.69-2.61]  | <0.001         |
| No                                | 784/1413               | Ref.            | Ref.           |
| CAD                               |                        |                 |                |
| Yes                               | 105/142                | 1.65[1.34-2.02]  | <0.001         |
| No                                | 772/1387               | Ref.            | Ref.           |
| Smoker                            |                        |                 |                |
| Yes                               | 496/795                | 1.35[1.18-1.54]  | <0.001         |
| No                                | 381/734                | Ref.            | Ref.           |
| Frail status                      |                        |                 |                |
| Non-frailty                       | 514/1001               | Ref.            | Ref.           |
| Prefrailty                        | 292/442                | 1.59[1.38-1.84]  | <0.001         |
| Frailty                           | 71/86                  | 3.03[2.36-3.89]  | <0.001         |
| Anthihypertensive medication      |                        |                 |                |
| Yes                               | 831/1394               | 2.11[1.57-2.84]  | <0.001         |
| No                                | 46/135                 | Ref.            | Ref.           |
| SBP categories                    |                        |                 |                |
| <110mmHg                          | 45/86                  | 1.02[0.74-1.40]  | 0.907          |
| 110-130mmHg                       | 205/360                | 1.13[0.94-1.35]  | 0.186          |
| 130-150mmHg                       | 290/556                | Ref.            | Ref.           |
| 150-170mmHg                       | 199/332                | 1.27[1.06-1.51]  | 0.011          |
| ≥170mmHg                          | 138/195                | 1.71[1.40-2.10]  | <0.001         |

Q1, quartile 1; Q3, quartile 3; COPD, chronic obstructive pulmonary disease; CAD, coronary artery disease; CKD, chronic kidney disease; BMI, body mass index
The analyses were adjusted for age, gender, race, diabetes, stroke, coronary artery disease, smoker, antihypertensive medication, and frail status. SBP, systolic blood pressure; CAD, coronary artery disease; Ref, reference. HR, hazard ratio; CI, confidence interval.

Table S3. Subgroup analyses of the risks of all cause-mortality for SBP.

| Subgroups     | SBP: <110mmHg | SBP: 110-130mmHg | SBP: 130-150mmHg | SBP: 150-170mmHg | SBP: ≥170mmHg |
|---------------|---------------|------------------|------------------|------------------|---------------|
| Frail status  |               |                  |                  |                  |               |
| Frailty       | 1.32 (0.50-3.47) | 0.78 (0.36-1.66) | Ref.             | 0.92 (0.41-2.08) | 1.50 (0.62-3.65) |
| Prefrailty    | 1.73 (1.00-2.99)* | 1.05 (0.76-1.44) | Ref.             | 1.10 (0.79-1.52) | 1.63 (1.12-2.37)* |
| Age           |               |                  |                  |                  |               |
| Age<75        | 1.00 (0.58-1.73) | 0.89 (0.62-1.29) | Ref.             | 0.77 (0.49-1.22) | 1.89 (1.17-3.06) |
| Age≥75        | 3.06 (1.28-7.29)* | 1.13 (0.70-1.83) | Ref.             | 1.32 (0.84-2.06) | 1.91 (1.13-3.23)* |

The analyses were adjusted for age, gender, race, diabetes, stroke, coronary artery disease, smoker, antihypertensive medication, and frailty. SBP, systolic blood pressure; *, p<0.05

Table S4. Subgroup analyses of the risks of cardiac death for SBP.

| Subgroups     | SBP: <110mmHg | SBP: 110-130mmHg | SBP: 130-150mmHg | SBP: 150-170mmHg | SBP: ≥170mmHg |
|---------------|---------------|------------------|------------------|------------------|---------------|
| Frail status  |               |                  |                  |                  |               |
| Frailty       | 5.97 (0.41-86.44) | 3.88 (0.38-39.63) | Ref.             | 2.10 (0.20-21.78) | 13.03 (0.95-179.51) |
| Prefrailty    | 1.37 (0.52-3.59) | 0.92 (0.53-1.59) | Ref.             | 1.04 (0.60-1.82) | 1.64 (0.85-3.15) |
| Age           |               |                  |                  |                  |               |
| Age<75        | 0.68 (0.23-1.97) | 0.96 (0.53-1.74) | Ref.             | 0.60 (0.29-1.27) | 2.35 (1.07-5.16)* |
| Age≥75        | 10.34 (2.13-50.06) | 1.91 (0.62-5.91) | Ref.             | 3.14 (1.07-9.22) | 4.59 (1.43-14.81) |

The analyses were adjusted for age, gender, race, diabetes, stroke, coronary artery disease, smoker, antihypertensive medication, and frailty. SBP, systolic blood pressure; *, p<0.05