Systolic Blood Pressure Intervention Trial (SPRINT)

Principal Results

Paul K. Whelton, MB, MD, MSc
Chair, SPRINT Steering Committee
Tulane University School of Public Health and Tropical Medicine, and School of Medicine
For the SPRINT Research Group
Observational studies identify strong association between BP and risk of CVD, with no evidence of threshold for the relationship.

High BP very common:
- High SBP leading risk factor for mortality and disability-adjusted life years
- Worldwide, >1 billion adults have hypertension

Clinical trials demonstrate antihypertensive drug therapy reduces risk of CVD.

However, optimal target for SBP lowering uncertain.
**SPRINT Research Question**

Examine effect of more intensive high blood pressure treatment than is currently recommended

Randomized Controlled Trial

**Target Systolic BP**

- **Intensive Treatment**
  - Goal SBP < 120 mm Hg

- **Standard Treatment**
  - Goal SBP < 140 mm Hg

**SPRINT design details available at:**

- ClinicalTrials.gov (NCT01206062)
Major Inclusion Criteria

• ≥50 years old

• Systolic blood pressure: 130 – 180 mm Hg (treated or untreated)

• Additional cardiovascular disease (CVD) risk
  
  • Clinical or subclinical CVD (excluding stroke)
  
  • Chronic kidney disease (CKD), defined as eGFR 20 – <60 ml/min/1.73m²
  
  • Framingham Risk Score for 10-year CVD risk ≥ 15%

• Age ≥ 75 years

At least one
Major Exclusion Criteria

- Stroke
- Diabetes mellitus
- Polycystic kidney disease
- Congestive heart failure (symptoms or EF < 35%)
- Proteinuria >1g/d
- CKD with eGFR < 20 mL/min/1.73m² (MDRD)
- Adherence concerns
Location of 102 SPRINT Clinical Centers

- Clinical Center Networks
  - Ohio
  - Southeast
  - Utah
  - UAB
  - VA

- Central Laboratory
- MRI Reading Center
- Project Office, NIH
- Coordinating Center
  - Wake Forest School of Medicine
- ECG Reading Center
- Drug Distribution Center

United States

Mexico

Dominican Republic

Gulf of California

Gulf of Mexico

Cuba

Puerto Rico
SPRINT: Enrollment and Follow-up Experience

Screened  
(N=14,692)

Randomized  
(N=9,361)

Intensive Treatment  
(N=4,678)

• Consent withdrawn  
224
• Discontinued intervention  
111
• Lost to follow-up  
154

Standard Treatment  
(N=4,683)

• Consent withdrawn  
242
• Discontinued intervention  
134
• Lost to follow-up  
121

Analyzed  
(Intention to treat)  
4,678

(Vital status assessment: entire cohort)
## Demographic and Baseline Characteristics

<table>
<thead>
<tr>
<th></th>
<th>Total N=9361</th>
<th>Intensive N=4678</th>
<th>Standard N=4683</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Demographic</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean (SD) age, years</td>
<td>67.9 (9.4)</td>
<td>67.9 (9.4)</td>
<td>67.9 (9.5)</td>
</tr>
<tr>
<td>% ≥75 years</td>
<td>28.2%</td>
<td>28.2%</td>
<td>28.2%</td>
</tr>
<tr>
<td>Female, %</td>
<td>35.6%</td>
<td>36.0%</td>
<td>35.2%</td>
</tr>
<tr>
<td>White, %</td>
<td>57.7%</td>
<td>57.7%</td>
<td>57.7%</td>
</tr>
<tr>
<td>African-American, %</td>
<td>29.9%</td>
<td>29.5%</td>
<td>30.4%</td>
</tr>
<tr>
<td>Hispanic, %</td>
<td>10.5%</td>
<td>10.8%</td>
<td>10.3%</td>
</tr>
<tr>
<td>Prior CVD, %</td>
<td>20.1%</td>
<td>20.1%</td>
<td>20.0%</td>
</tr>
<tr>
<td>Mean 10-year Framingham CVD risk, %</td>
<td>20.1%</td>
<td>20.1%</td>
<td>20.1%</td>
</tr>
<tr>
<td>Taking antihypertensive meds, %</td>
<td>90.6%</td>
<td>90.8%</td>
<td>90.4%</td>
</tr>
<tr>
<td>Mean (SD) number of antihypertensive meds</td>
<td>1.8 (1.0)</td>
<td>1.8 (1.0)</td>
<td>1.8 (1.0)</td>
</tr>
<tr>
<td><strong>Baseline BP, mm Hg</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Systolic</td>
<td>139.7 (15.6)</td>
<td>139.7 (15.8)</td>
<td>139.7 (15.4)</td>
</tr>
<tr>
<td>Diastolic</td>
<td>78.1 (11.9)</td>
<td>78.2 (11.9)</td>
<td>78.0 (12.0)</td>
</tr>
</tbody>
</table>
# Selected Baseline Laboratory Characteristics

<table>
<thead>
<tr>
<th></th>
<th>Total N=9361</th>
<th>Intensive N=4678</th>
<th>Standard N=4683</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mean (SD) eGFR, mL/min/1.73 m²</strong></td>
<td>71.7 (20.6)</td>
<td>71.8 (20.7)</td>
<td>71.7 (20.5)</td>
</tr>
<tr>
<td>% with eGFR&lt;60 mL/min/1.73m²</td>
<td>28.3</td>
<td>28.4</td>
<td>28.1</td>
</tr>
<tr>
<td><strong>Mean (SD) Urine albumin/creatinine, mg/g</strong></td>
<td>42.6 (166.3)</td>
<td>44.1 (178.7)</td>
<td>41.1 (152.9)</td>
</tr>
<tr>
<td><strong>Mean (SD) Total cholesterol, mg/dL</strong></td>
<td>190.1 (41.2)</td>
<td>190.2 (41.4)</td>
<td>190.0 (40.9)</td>
</tr>
<tr>
<td><strong>Mean (SD) Fasting plasma glucose, mg/dL</strong></td>
<td>98.8 (13.5)</td>
<td>98.8 (13.7)</td>
<td>98.8 (13.4)</td>
</tr>
</tbody>
</table>
Pre-specified Subgroups of Special Interest

- Age (<75 vs. ≥75 years)
- Gender (Men vs. Women)
- Race/ethnicity (African-American vs. Non African-American)
- CKD (eGFR <60 vs. ≥60 mL/min/1.73m²)
- CVD (CVD vs. no prior CVD)
- Level of BP (Baseline SBP tertiles: ≤132, 133 to 144, ≥145 mm Hg)
Primary Outcome and Primary Hypothesis

• **Primary outcome**
  • CVD composite: first occurrence of
    • Myocardial infarction (MI)
    • Acute coronary syndrome (non-MI ACS)
    • Stroke
    • Acute decompensated heart failure (HF)
    • Cardiovascular disease death

• **Primary hypothesis***
  • CVD composite event rate lower in intensive compared to standard treatment

*Estimated power of 88.7% to detect a 20% difference
  - based on recruitment of 9,250 participants, 4-6 years of follow-up and loss to follow-up of 2%/year.
Additional Outcomes

• All-cause mortality

• Primary outcome + all-cause mortality

• Renal
  • Main secondary outcome:
    • Participants with CKD at baseline: incidence of decline in eGFR ≥50% or ESRD

  • Additional secondary outcomes:
    • Participants without CKD at baseline: incidence of decline in eGFR ≥30% (to <60 mL/min/1.73m²)

    • Participants with or without CKD at baseline: Incidence of albuminuria
      • Doubling of urinary albumin/creatinine (<10 to >10 mg/g)
Follow-up Assessment of Selected Measures

• **CVD outcomes**
  • Pre-specified diagnostic criteria
  • Ascertainment method identical in both treatment arms
    • Structured interview every 3 months
  • Possible events adjudicated by a panel of experts, blinded to treatment assignment

• **Fatal events**
  • Structured approach to collection of information
  • Cause of death adjudicated by the panel of experts, blinded to treatment assignment

• **Safety events**
  • Could be reported at any SPRINT visit
  • Observers aware of treatment assignment

• **Labs:** blood chemistries and urine albumin/creatinine
BP Intervention

• BP monitored monthly for 3 months and every 3 months thereafter (additional visits could be scheduled)

• Antihypertensive medication titration decisions based on mean BP (3 readings at each visit), using a structured stepped-care approach

• Agents from all major antihypertensive drug classes available free of charge

• Periodic assessment for orthostatic hypotension and related symptoms
Systolic BP During Follow-up

Year 1

Mean SBP
136.2 mm Hg

Mean SBP
121.4 mm Hg

Standard

Intensive

Average SBP (During Follow-up)

Standard: 134.6 mm Hg

Intensive: 121.5 mm Hg

Average number of antihypertensive medications

Number of participants
Decision to Stop BP Intervention

- On August 20\textsuperscript{th}, 2015, NHLBI Director accepted DSMB recommendation to inform SPRINT investigators and participants of CVD results

- Concurrently, decision made to stop BP intervention

- This presentation based on adjudicated events that occurred through August 20\textsuperscript{th}, 2015
  - Median follow-up = 3.26 years

- Data for some secondary non-CVD outcomes (e.g. dementia and cognitive impairment) being collected at final close-out visit and this process will be completed in 2016
SPRINT Primary Outcome
Cumulative Hazard

Hazard Ratio = 0.75 (95% CI: 0.64 to 0.89)

- Standard
  - (319 events)
- Intensive
  - (243 events)

During Trial (median follow-up = 3.26 years)
Number Needed to Treat (NNT) to prevent a primary outcome = 61
## SPRINT Primary Outcome and its Components
### Event Rates and Hazard Ratios

<table>
<thead>
<tr>
<th></th>
<th>Intensive</th>
<th></th>
<th>Standard</th>
<th></th>
<th>HR (95% CI)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. of Events</td>
<td>Rate, %/year</td>
<td>No. of Events</td>
<td>Rate, %/year</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Primary Outcome</strong></td>
<td>243</td>
<td>1.65</td>
<td>319</td>
<td>2.19</td>
<td>0.75 (0.64, 0.89)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td><strong>All MI</strong></td>
<td>97</td>
<td>0.65</td>
<td>116</td>
<td>0.78</td>
<td>0.83 (0.64, 1.09)</td>
<td>0.19</td>
</tr>
<tr>
<td><strong>Non-MI ACS</strong></td>
<td>40</td>
<td>0.27</td>
<td>40</td>
<td>0.27</td>
<td>1.00 (0.64, 1.55)</td>
<td>0.99</td>
</tr>
<tr>
<td><strong>All Stroke</strong></td>
<td>62</td>
<td>0.41</td>
<td>70</td>
<td>0.47</td>
<td>0.89 (0.63, 1.25)</td>
<td>0.50</td>
</tr>
<tr>
<td><strong>All HF</strong></td>
<td>62</td>
<td>0.41</td>
<td>100</td>
<td>0.67</td>
<td>0.62 (0.45, 0.84)</td>
<td>0.002</td>
</tr>
<tr>
<td><strong>CVD Death</strong></td>
<td>37</td>
<td>0.25</td>
<td>65</td>
<td>0.43</td>
<td>0.57 (0.38, 0.85)</td>
<td>0.005</td>
</tr>
</tbody>
</table>
All-cause Mortality
Cumulative Hazard

Hazard Ratio = 0.73 (95% CI: 0.60 to 0.90)

During Trial (median follow-up = 3.26 years)

Number Needed to Treat (NNT) to Prevent a death = 90
Primary Outcome Experience in the Six Pre-specified Subgroups of Interest

<table>
<thead>
<tr>
<th>Subgroup</th>
<th>HR</th>
<th>P*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>0.75 (0.64, 0.89)</td>
<td></td>
</tr>
<tr>
<td>No Prior CKD</td>
<td>0.70 (0.56, 0.87)</td>
<td>0.36</td>
</tr>
<tr>
<td>Prior CKD</td>
<td>0.82 (0.63, 1.07)</td>
<td></td>
</tr>
<tr>
<td>Age &lt; 75</td>
<td>0.80 (0.64, 1.00)</td>
<td>0.32</td>
</tr>
<tr>
<td>Age ≥ 75</td>
<td>0.67 (0.51, 0.86)</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>0.84 (0.62, 1.14)</td>
<td>0.45</td>
</tr>
<tr>
<td>Male</td>
<td>0.72 (0.59, 0.88)</td>
<td></td>
</tr>
<tr>
<td>African–American</td>
<td>0.77 (0.55, 1.06)</td>
<td>0.83</td>
</tr>
<tr>
<td>Non African–American</td>
<td>0.74 (0.61, 0.90)</td>
<td></td>
</tr>
<tr>
<td>No Prior CVD</td>
<td>0.71 (0.57, 0.88)</td>
<td>0.39</td>
</tr>
<tr>
<td>Prior CVD</td>
<td>0.83 (0.62, 1.09)</td>
<td></td>
</tr>
<tr>
<td>SBP ≤ 132</td>
<td>0.70 (0.51, 0.95)</td>
<td>0.77</td>
</tr>
<tr>
<td>132 &lt; SBP &lt; 145</td>
<td>0.77 (0.57, 1.03)</td>
<td></td>
</tr>
<tr>
<td>SBP ≥ 145</td>
<td>0.83 (0.63, 1.09)</td>
<td></td>
</tr>
</tbody>
</table>

*Treatment by subgroup interaction
*Unadjusted for multiplicity
## Renal Disease Outcomes

<table>
<thead>
<tr>
<th></th>
<th>Intensive</th>
<th>Standard</th>
<th>HR (95% CI)</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Events</td>
<td>%/yr</td>
<td>Events</td>
<td>%/yr</td>
</tr>
<tr>
<td><strong>Participants with CKD at Baseline</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Primary CKD outcome</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≥50% reduction in eGFR*</td>
<td>14</td>
<td>0.33</td>
<td>15</td>
<td>0.36</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>0.23</td>
<td>11</td>
<td>0.26</td>
</tr>
<tr>
<td>Dialysis</td>
<td>6</td>
<td>0.14</td>
<td>10</td>
<td>0.24</td>
</tr>
<tr>
<td>Kidney transplant</td>
<td>0</td>
<td>-</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td><strong>Secondary CKD Outcome</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incident albuminuria**</td>
<td>49</td>
<td>3.02</td>
<td>59</td>
<td>3.90</td>
</tr>
<tr>
<td><strong>Participants without CKD at Baseline</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Secondary CKD outcomes</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≥30% reduction in eGFR*</td>
<td>127</td>
<td>1.21</td>
<td>37</td>
<td>0.35</td>
</tr>
<tr>
<td>Incident albuminuria**</td>
<td>110</td>
<td>2.00</td>
<td>135</td>
<td>2.41</td>
</tr>
</tbody>
</table>

*Confirmed on a second occasion ≥90 days apart  **Doubling of urinary albumin/creatinine ratio from <10 to >10 mg/g
## Serious Adverse Events* (SAE) During Follow-up

<table>
<thead>
<tr>
<th>All SAE reports</th>
<th>Number (%) of Participants</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Intensive</td>
<td>Standard</td>
<td>HR (P Value)</td>
</tr>
<tr>
<td></td>
<td>1793 (38.3)</td>
<td>1736 (37.1)</td>
<td>1.04 (0.25)</td>
</tr>
</tbody>
</table>

### SAEs associated with Specific Conditions of Interest

<table>
<thead>
<tr>
<th>Condition</th>
<th>Intensive</th>
<th>Standard</th>
<th>HR (P Value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypotension</td>
<td>110 (2.4)</td>
<td>66 (1.4)</td>
<td>1.67 (0.001)</td>
</tr>
<tr>
<td>Syncope</td>
<td>107 (2.3)</td>
<td>80 (1.7)</td>
<td>1.33 (0.05)</td>
</tr>
<tr>
<td>Injurious fall</td>
<td>105 (2.2)</td>
<td>110 (2.3)</td>
<td>0.95 (0.71)</td>
</tr>
<tr>
<td>Bradycardia</td>
<td>87 (1.9)</td>
<td>73 (1.6)</td>
<td>1.19 (0.28)</td>
</tr>
<tr>
<td>Electrolyte abnormality</td>
<td>144 (3.1)</td>
<td>107 (2.3)</td>
<td>1.35 (0.020)</td>
</tr>
<tr>
<td>Acute kidney injury or acute renal failure</td>
<td>193 (4.1)</td>
<td>117 (2.5)</td>
<td>1.66 (&lt;0.001)</td>
</tr>
</tbody>
</table>

*Fatal or life threatening event, resulting in significant or persistent disability, requiring or prolonging hospitalization, or judged important medical event.
## Number (%) of Participants with a Monitored Clinical Measure During Follow-up

<table>
<thead>
<tr>
<th>Laboratory Measures</th>
<th>Number (%) of Participants</th>
<th>Intensive</th>
<th>Standard</th>
<th>HR (P Value)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sodium &lt;130 mmol/L</strong></td>
<td></td>
<td>180 (3.9)</td>
<td>100 (2.2)</td>
<td>1.76 (&lt;0.001)</td>
</tr>
<tr>
<td><strong>Potassium &lt;3.0 mmol/L</strong></td>
<td></td>
<td>114 (2.5)</td>
<td>74 (1.6)</td>
<td>1.50 (0.006)</td>
</tr>
<tr>
<td><strong>Potassium &gt;5.5 mmol/l</strong></td>
<td></td>
<td>176 (3.8)</td>
<td>171 (3.7)</td>
<td>1.00 (0.97)</td>
</tr>
<tr>
<td><strong>Signs and Symptoms</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Orthostatic hypotension</strong></td>
<td></td>
<td>777 (16.6)</td>
<td>857 (18.3)</td>
<td>0.88 (0.013)</td>
</tr>
<tr>
<td><strong>Orthostatic hypotension with dizziness</strong></td>
<td></td>
<td>62 (1.3)</td>
<td>71 (1.5)</td>
<td>0.85 (0.35)</td>
</tr>
</tbody>
</table>

1. Detected on routine or PRN labs; routine labs drawn quarterly for first year, then q 6 months
2. Drop in SBP ≥20 mmHg or DBP ≥10 mmHg 1 minute after standing (measured at 1, 6, and 12 months and yearly thereafter)
Summary and Conclusions

• SPRINT examined effects of more intensive antihypertensive therapy than currently recommended

• Participants were US adults ≥50 years with hypertension and additional risk for CVD

• Rapid and sustained difference in SBP achieved between the two treatment arms

• Trial stopped early, due to benefit, after median follow-up of 3.26 years

• Incidence of primary outcome (composite of CVD events) 25% lower in Intensive compared to Standard Group and all-cause mortality reduced by 27%.

• Treatment effect similar in all six pre-specified groups of interest.

• The “number needed to treat” to prevent primary outcome event or death 61 and 90, respectively.
Summary and Conclusions

- In participants with CKD at baseline, no differences in renal outcomes

- In participants without CKD at baseline, incidence of eGFR reduction ≥ 30% more common in Intensive Group

- No overall difference in serious adverse events (SAEs) between treatment groups

- SAEs associated with hypotension, syncope, electrolyte abnormalities, and hospital discharge reports of acute kidney injury or acute renal failure more common in Intensive Group

- Overall, benefits of more intensive BP lowering exceeded the potential for harm
Acknowledgements

• 9,361 volunteers who agreed to participate in SPRINT

• Investigators and staff, including Steering Committee, other principals at the 5 Clinical Center Networks, 102 participating Clinical Centers, Coordinating Center, Central Laboratory, ECG Reading Center, MRI Reading Center, and Drug Distribution Center

• National Institutes of Health
  • National Heart, Lung, and Blood Institute (NHLBI)
  • National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)
  • National Institute on Aging (NIA)
  • National Institute of Neurological Disorders and Stroke (NINDS)

• SPRINT Data and Safety Monitoring Board (DSMB)

• Takeda and Arbor Pharmaceuticals (donated 5% of medication used)
Thank You

Additional details of the SPRINT principal results

The SPRINT Research Group
A Randomized Trial of Intensive versus Standard Blood-Pressure Control
N Engl J Med. DOI: 10.1056/NEJMoa1511939
(simultaneous e publication)
Back-up Slides
SPRINT Treatment Algorithm

Intensive Treatment

Start Here: At randomization visit, begin with 2 or 3 drug therapy using a combination of a thiazide-type diuretic, and/or an ACEI or ARB (but not both) and/or a CCB.

Include β-blocker or other agents as appropriate for compelling indication.

Monitor as Designated Through Follow-up.

Is SBP > 120 mm Hg at this visit?

Yes

Is this a milestone visit?

Yes

You must:

A) Add Therapy Not Already in Use**

AND

B) See participant monthly until SBP < 120 mm Hg^.

No

You must:

A) Titrate or Add Therapy Not Already in Use**

AND

B) See participant monthly until SBP < 120 mm Hg^.

No

Is DBP > 100 mm Hg at this visit or is DBP > 90 mm Hg on last two visits?

No

Continue therapy.

** May begin with a single agent for participants 75 years or older with SBP < 160 on 0-1 meds at study entry. A second medication should be added at the 1-Month visit if participant is asymptomatic and SBP > 180.

** May use loop diuretic for participants with advanced CKD.

^ Unless side effects warrant change in therapy.

** Consider consulting with the Clinical Center Network before adding a fifth anti-hypertensive medication.

* Or until clinical decision made that therapy should not be increased further.
**SPRINT Treatment Algorithm**

**Start Here:** Convert to SPRINT medication, if indicated; randomization visit is first visit that should be considered in 2-visit criteria

- **Monitor as Designated Through Follow-up**
  - **Yes**
    - **Titrature or Add Therapy Not Already in Use**
    - Schedule 1 month PRN visit when SSBP $\geq 160$ mm Hg
  - **No**
    - **Is DBP $\geq 100$ mm Hg at this visit or $\geq 90$ mm Hg on 2 consecutive protocol visits?**
      - **Yes**
        - **Titrature or Add Therapy Not Already in Use**
      - **No**
    - **Is SBP $< 130$ mm Hg at this visit or $< 135$ mm Hg on 2 consecutive protocol visits?**
      - **Yes**
        - **Stop Down**
      - **No**
        - **Continue Therapy**

---

Include β-blocker or other agents as appropriate for compelling indications

**Unless side effects warrant change in therapy**

**Consider consulting with the Clinical Center Network before adding a fifth anti-hypertensive medication**
### All-cause Mortality Experience in the Six Pre-specified Subgroups of Interest

<table>
<thead>
<tr>
<th>Subgroup</th>
<th>Intensive</th>
<th>Standard</th>
<th>HR</th>
<th>Int P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>155/4678 (3.31)</td>
<td>210/4683 (4.48)</td>
<td>0.73 (0.60, 0.90)</td>
<td></td>
</tr>
<tr>
<td>No Prior CKD</td>
<td>85/3348 (2.54)</td>
<td>115/3367 (3.42)</td>
<td>0.75 (0.57, 1.00)</td>
<td>0.76</td>
</tr>
<tr>
<td>Prior CKD</td>
<td>70/1330 (5.26)</td>
<td>95/1316 (7.22)</td>
<td>0.73 (0.53, 1.00)</td>
<td></td>
</tr>
<tr>
<td>Age &lt; 75</td>
<td>82/3361 (2.44)</td>
<td>104/3364 (3.09)</td>
<td>0.77 (0.58, 1.03)</td>
<td>0.58</td>
</tr>
<tr>
<td>Age ≥ 75</td>
<td>73/1317 (5.54)</td>
<td>106/1319 (8.04)</td>
<td>0.68 (0.50, 0.92)</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>46/1684 (2.73)</td>
<td>54/1648 (3.28)</td>
<td>0.85 (0.57, 1.26)</td>
<td>0.49</td>
</tr>
<tr>
<td>Male</td>
<td>109/2994 (3.64)</td>
<td>156/3035 (5.14)</td>
<td>0.71 (0.55, 0.91)</td>
<td></td>
</tr>
<tr>
<td>African-American</td>
<td>53/1454 (3.65)</td>
<td>55/1493 (3.68)</td>
<td>0.96 (0.65, 1.40)</td>
<td>0.06</td>
</tr>
<tr>
<td>Non African-American</td>
<td>102/3224 (3.16)</td>
<td>155/3190 (4.86)</td>
<td>0.64 (0.50, 0.82)</td>
<td></td>
</tr>
<tr>
<td>No Prior CVD</td>
<td>106/3738 (2.84)</td>
<td>140/3746 (3.74)</td>
<td>0.75 (0.58, 0.96)</td>
<td>0.78</td>
</tr>
<tr>
<td>Prior CVD</td>
<td>49/940 (5.21)</td>
<td>70/937 (7.47)</td>
<td>0.70 (0.48, 1.02)</td>
<td></td>
</tr>
<tr>
<td>SBP ≤ 132</td>
<td>46/1583 (2.91)</td>
<td>64/1553 (4.12)</td>
<td>0.73 (0.49, 1.07)</td>
<td>0.70</td>
</tr>
<tr>
<td>132 &lt; SBP &lt; 145</td>
<td>41/1489 (2.75)</td>
<td>63/1549 (4.07)</td>
<td>0.69 (0.46, 1.03)</td>
<td></td>
</tr>
<tr>
<td>SBP ≥ 145</td>
<td>68/1606 (4.23)</td>
<td>83/1581 (5.25)</td>
<td>0.81 (0.59, 1.13)</td>
<td></td>
</tr>
</tbody>
</table>