

## Supplemental Material

Supplemental Table 1. Characteristics of the patients that responded to the sexual and social questionnaires compared with the overall SPRINT population

Variable	Sexual analysis		All population	
	Men	Women	Men	Women
N.	1268	613	6029	3332
Intensive	634 (48.9%)	330 (50.4%)	2994 (49.7%)	1684 (50.5%)
Age, yr	66.8 ± 9.7	67.4 ± 10.0	67.6 ± 9.3	68.5 ± 9.5
Race				
Black	360 (27.8%)	255 (38.9%)	1531 (25.4%)	1271 (38.1%)
Hispanic	140 (10.8%)	100 (15.3%)	530 (8.8%)	454 (13.6%)
Other	22 (1.7%)	10 (1.5%)	121 (2.0%)	55 (1.7%)
White	774 (59.7%)	290 (44.3%)	3847 (63.8%)	1552 (46.6%)
BMI, Kg/m <sup>2</sup>	29.9 ± 5.4	30.2 ± 6.6	29.7 ± 5.3	30.1 ± 6.6
SBP, mmHg	139.0 ± 14.8	142.2 ± 17.1	138.8 ± 14.8	141.2 ± 16.8
DBP, mmHg	78.8 ± 11.8	78.9 ± 12.1	78.4 ± 11.8	77.6 ± 12.2
Smoking				
Never	487 (37.6%)	350 (53.4%)	2297 (38.1%)	1825 (54.8%)
Former	611 (47.1%)	207 (31.6%)	2918 (48.4%)	1055 (31.7%)
Current	195 (15.0%)	98 (15.0%)	800 (13.3%)	440 (13.2%)
eGFR, ml/min	74.1 ± 20.7	71.4 ± 22.1	72.5 ± 20.1	70.3 ± 21.4
eGFR<60	319 (24.6%)	204 (31.1%)	1588 (26.3%)	1058 (31.8%)
HDL-c, mg/dL	48.7 ± 12.1	59.2 ± 16.1	49.3 ± 12.4	59.4 ± 15.6
Triglycerides, mg/dL	136.0 ± 135.3	127.9 ± 82.7	129.1 ± 100.4	120.2 ± 68.6
UACR, mg/gCr	8.7 (5.1, 20.3)	10.5 (6.3, 21.6)	8.9 (5.2, 21.6)	10.6 (6.5, 21.1)
Subclinical CVD	72 (5.6%)	30 (4.6%)	321 (5.3%)	172 (5.2%)
N. anti-HT drugs				
0	125 (9.6%)	51 (7.8%)	651 (10.8%)	231 (6.9%)
1	383 (29.6%)	188 (28.7%)	1779 (29.5%)	974 (29.2%)
2	459 (35.4%)	242 (36.9%)	2097 (34.8%)	1195 (35.9%)
3+	329 (25.4%)	174 (26.6%)	1502 (24.9%)	932 (27.9%)
Statin use	614 (47.4%)	233 (35.8%)	2818 (47.1%)	1236 (37.4%)

Supplemental Table 2. Use of anti-hypertensive drugs in the populations that responded to the sexual health questionnaires

Medications	Overall			Standard			Intensive		
	Women	Men	P-value	Women	Men	P-value	Women	Men	P-value
ACEi/ARBs	70.60%	70.80%	0.84	62.70%	62.60%	0.86	78.20%	79.50%	0.083
Thiazides	57.10%	52.80%	<0.001	45.60%	41.90%	<0.001	68.20%	64.50%	<0.001
ACEi/ARBs/Thiazides	42.10%	39.20%	<0.001	29.00%	26.80%	0.005	54.60%	52.50%	0.017
CCB	46.90%	48.10%	0.06	39.80%	39.60%	0.79	53.70%	57.20%	<0.001
Beta-blockers	39.50%	39.80%	0.61	33.30%	34.30%	0.25	45.40%	45.70%	0.74
MRAs	7.00%	3.80%	<0.001	6.70%	1.70%	<0.001	7.30%	6.00%	0.003
Central acting	5.60%	13.10%	<0.001	2.80%	8.90%	<0.001	8.30%	17.60%	<0.001
Loop diuretics	8.30%	5.60%	<0.001	6.10%	5.40%	0.084	10.50%	5.60%	<0.001
Total	9531	18544		4672	9590		4859	8954	

Supplemental Table 3. Quality of erections comparing intensive vs. standard treatment with anti-hypertensive regimens that exclude certain drug classes

Men	Coef.	LCI	UCI	P
<b>Time (months): 0 (randomization) to 48 months</b>				
<b>Sexual activity questions</b>	<b>Continuous</b>			
<b>Confidence that you could get and keep an erection?</b>				
No ACEi/ARBs				
0	Ref.			
6	-0.08	-0.17	0	0.046
12	-0.12	-0.21	-0.04	0.005
24	-0.18	-0.27	-0.1	<0.001
36	-0.23	-0.3	-0.16	<0.001
48	-0.02	-0.15	0.1	0.703
No thiazide				
0	Ref.			
6	-0.04	-0.11	0.02	0.186
12	-0.06	-0.13	0	0.064
24	-0.03	-0.09	0.04	0.448
36	-0.07	-0.13	-0.02	0.01
48	-0.05	-0.13	0.04	0.259
No ACEi/ARBs nor thiazide				
0	Ref.			
6	-0.05	-0.11	0	0.067
12	-0.1	-0.16	-0.05	0.001
24	-0.09	-0.15	-0.03	0.003
36	-0.11	-0.16	-0.06	<0.001
48	-0.07	-0.15	0	0.061
No CCBs				
0	Ref.			
6	-0.07	-0.13	-0.01	0.024
12	-0.06	-0.13	0	0.039
24	-0.05	-0.11	0.01	0.091
36	-0.09	-0.14	-0.04	0.001
48	-0.06	-0.13	0.01	0.101
No beta-blocker				
0	Ref.			
6	-0.06	-0.11	0	0.053
12	-0.03	-0.09	0.02	0.238
24	0	-0.06	0.05	0.906
36	-0.05	-0.1	-0.01	0.02
48	-0.1	-0.17	-0.03	0.005
<b>Erections hard enough for penetration?</b>				
No ACEi/ARBs				

0	Ref.			
6	-0.06	-0.16	0.03	0.212
12	-0.04	-0.14	0.06	0.398
24	-0.15	-0.24	-0.05	0.004
36	-0.25	-0.34	-0.17	<0.001
48	0.13	-0.01	0.27	0.077
No thiazide				
0	Ref.			
6	-0.06	-0.13	0.02	0.155
12	-0.05	-0.13	0.03	0.234
24	-0.08	-0.16	0	0.059
36	-0.05	-0.12	0.02	0.138
48	0.02	-0.08	0.12	0.686
No ACEi/ARB nor thiazide				
0	Ref.			
6	-0.04	-0.11	0.02	0.19
12	-0.04	-0.11	0.03	0.297
24	-0.1	-0.17	-0.04	0.003
36	-0.08	-0.14	-0.03	0.004
48	0	-0.09	0.09	0.962
No CCB				
0	Ref.			
6	-0.1	-0.17	-0.02	0.01
12	-0.05	-0.13	0.02	0.174
24	-0.12	-0.2	-0.05	0.002
36	-0.14	-0.2	-0.08	0
48	-0.09	-0.18	0	0.045
No beta-blocker				
0	Ref.			
6	-0.05	-0.12	0.01	0.127
12	-0.11	-0.18	-0.04	0.001
24	-0.07	-0.14	0	0.038
36	-0.03	-0.08	0.03	0.3
48	-0.03	-0.12	0.05	0.428
<b>Erections maintained after penetration?</b>				
No ACEi/ARB				
0	Ref.			
6	-0.06	-0.15	0.04	0.239
12	-0.23	-0.33	-0.13	<0.001
24	-0.18	-0.28	-0.08	<0.001
36	-0.28	-0.36	-0.2	<0.001
48	0.09	-0.05	0.23	0.201
No thiazide				

0	Ref.			
6	-0.02	-0.1	0.06	0.603
12	-0.12	-0.2	-0.04	0.003
24	-0.2	-0.28	-0.12	<0.001
36	-0.2	-0.27	-0.14	<0.001
48	0.18	0.08	0.28	<0.001
No ACEi/ARB nor thiazide				
0	Ref.			
6	-0.04	-0.11	0.03	0.23
12	-0.13	-0.2	-0.06	<0.001
24	-0.18	-0.25	-0.12	<0.001
36	-0.19	-0.25	-0.14	<0.001
48	0.12	0.04	0.21	0.006
No CCB				
0	Ref.			
6	-0.11	-0.19	-0.04	0.003
12	-0.13	-0.21	-0.06	0.001
24	-0.18	-0.25	-0.1	<0.001
36	-0.21	-0.27	-0.15	<0.001
48	-0.07	-0.16	0.02	0.109
No beta-blocker				
0	Ref.			
6	-0.08	-0.14	-0.01	0.021
12	-0.19	-0.25	-0.12	<0.001
24	-0.08	-0.14	-0.01	0.017
36	-0.1	-0.15	-0.04	<0.001
48	-0.05	-0.14	0.03	0.203
<b>Erections maintained to completion of intercourse?</b>				
No ACEi/ARBs				
0	Ref.			
6	-0.01	-0.1	0.07	0.759
12	-0.04	-0.13	0.05	0.371
24	-0.14	-0.23	-0.05	0.002
36	-0.14	-0.22	-0.07	<0.001
48	0.33	0.2	0.46	<0.001
No thiazide				
0	Ref.			
6	0.01	-0.06	0.08	0.757
12	-0.07	-0.15	0	0.037
24	-0.01	-0.08	0.06	0.731
36	-0.04	-0.1	0.02	0.157
48	0.24	0.16	0.33	<0.001
No ACEi/ARB nor thiazide				

0	Ref.			
6	0	-0.006	0.006	0.99
12	-0.06	-0.12	0.01	0.078
24	-0.07	-0.13	0	0.034
36	-0.07	-0.12	-0.02	0.005
48	0.22	0.14	0.3	0
No CCB				
0	Ref.			
6	-0.09	-0.16	-0.03	0.003
12	-0.09	-0.15	-0.02	0.008
24	-0.09	-0.15	-0.02	0.007
36	-0.13	-0.18	-0.08	<0.001
48	0.01	-0.06	0.09	0.723
No beta-blocker				
0	Ref.			
6	-0.09	-0.14	-0.03	0.003
12	-0.1	-0.16	-0.05	<0.001
24	-0.03	-0.09	0.02	0.248
36	-0.07	-0.11	-0.02	0.005
48	0	-0.07	0.07	0.946

Supplemental Table 4. Association of sexual questionnaires with clinical features in multivariable models

Sex questionnaire	Beta (95%CI)	P-value
<b>Men</b>		
<b>How satisfied with your overall sexual life?</b>		
Age <65yr	Ref.	-
65-75yr	-0.41 (-0.60 to -0.22)	<0.001
>75yr	-0.84 (-1.06 to -0.63)	<0.001
BMI <30Kg/m <sup>2</sup>	Ref.	-
≥30	-0.25 (-0.41 to -0.09)	0.002
eGFR >60 ml/min/1.73m <sup>2</sup>	Ref.	-
≤60	-0.22 (-0.40 to -0.03)	0.023
<b>Confidence that you could get and keep an erection?</b>		
Age <65yr	Ref.	-
65-75yr	-0.56 (-0.72 to -0.40)	<0.001
>75yr	-0.89 (-1.07 to -0.70)	<0.001
BMI <30Kg/m <sup>2</sup>	Ref.	-
≥30	-0.22 (-0.36 to -0.09)	0.002
<b>Erections hard enough for penetration?</b>		
Age <65yr	Ref.	-
65-75yr	-0.68 (-0.87 to -0.50)	<0.001
>75yr	-1.12 (-1.34 to -0.90)	<0.001
BMI <30Kg/m <sup>2</sup>	Ref.	-
≥30	-0.21 (-0.37 to -0.05)	0.012
<b>Erections maintained after penetration?</b>		
Age <65yr	Ref.	-
65-75yr	-0.71 (-0.90 to -0.52)	<0.001
>75yr	-1.05 (-1.28 to -0.83)	<0.001
BMI <30Kg/m <sup>2</sup>	Ref.	-
≥30	-0.28 (-0.45 to -0.11)	0.001
Cardiovascular disease	-0.23 (-0.43 to -0.02)	0.029
<b>Erection maintained to completion of intercourse?</b>		
Age <65yr	Ref.	-
65-75yr	-0.61 (-0.80 to -0.42)	<0.001
>75yr	-1.08 (-1.30 to -0.86)	<0.001
BMI <30Kg/m <sup>2</sup>	Ref.	-
≥30	-0.29 (-0.45 to -0.12)	<0.001
eGFR >60 ml/min/1.73m <sup>2</sup>	Ref.	-
≤60	-0.20 (-0.39 to -0.01)	0.039
<b>Women</b>		
<b>How satisfied with your overall sexual life?</b>		
Number of anti-hypertensive agents, 0	Ref.	-
1	-0.54 (-0.88 to -0.20)	0.002
2+	-0.44 (-0.76 to -0.12)	0.008
<b>How often do you feel sexual desire or interest?</b>		



Age <65yr	Ref.	-
65-75yr	-0.22 (-0.43 to -0.01)	0.040
>75yr	-0.64 (-0.88 to -0.40)	<0.001
White race	Ref.	-
Black	0.30 (0.10-0.49)	0.003
Hispanic	0.51 (0.25-0.77)	<0.001
<b>How often do you become lubricated during sexual activity?</b>		
Age <65yr	Ref.	-
>75yr	-0.58 (-1.09 to -0.07)	0.026
eGFR >60 ml/min/1.73m <sup>2</sup>	Ref.	-
≤60	-0.35 (-0.70 to -0.01)	0.049
White race	Ref.	-
Black	0.43 (0.09-0.77)	0.013

Caption: only the variables with a p-value <0.05 are presented in the final model. The variables introduced in the model were: treatment assignment (standard vs. intensive), age, race, systolic blood pressure, body mass index, smoking history, number of anti-hypertensive agents, estimated glomerular filtration rate, presence of clinical or subclinical cardiovascular disease, total cholesterol levels, glucose levels, urinary albumin-to-creatinine ratio.

Legend: BMI, body mass index; eGFR, estimated glomerular filtration rate.

Supplemental Table 5. Association of erection questionnaires with the primary outcome

<b>Men</b> (Primary outcome events n. =117)	<b>HR</b>	<b>LCI</b>	<b>UCI</b>	<b>P</b>
<b>Erection questionnaire (1=worse; 5=best)</b>				
Confidence that you could get and keep an erection?	0.86	0.64	1.15	0.32
Erections hard enough for penetration?	0.94	0.73	1.20	0.61
Erections maintained after penetration?	1.00	0.78	1.28	0.99
Erections maintained to completion of intercourse?	1.12	0.86	1.45	0.41
<b>Women</b> (Primary outcome events n. =31)	<b>HR</b>	<b>LCI</b>	<b>UCI</b>	<b>P</b>
How satisfied with your overall sexual life?	1.09	0.83	1.43	0.55
How often do you feel sexual desire or interest?	0.62	0.41	0.94	0.025
How often do you feel sexually aroused during sexual activity?	0.52	0.26	1.07	0.075
How often do you become lubricated during sexual activity?	0.71	0.36	1.39	0.31
How often do you reach orgasm?	0.63	0.33	1.22	0.17
Satisfied with sexual relationship with partner?	0.66	0.36	1.21	0.18
Satisfied with emotional closeness during sexual activity?	0.87	0.49	1.54	0.62

Legend: HR, hazard ratio; LCI, lower bound of the 95% confidence interval; UCI, upper bound of the 95% confidence interval.

Models adjusted on age, body mass index, presence of chronic kidney disease and cardiovascular disease.



