```
htn_table <- tableby(htn_fmla, data = phenotype, control=my_controls)
summary(htn_table, labelTranslations = my_labels, title = "Summary Statistics for Phenotypes By Hyperten
```

Table 1: Summary Statistics for Phenotypes By Hypertension

	0 (N=1212)	1 (N=639)	Total (N=1851)	p value
Diastolic Blood Pressure				< 0.001
Mean (SD)	70.144 (8.953)	79.776 (11.802)	73.469 (11.022)	
Median (Q1, Q3)	70.500 (64.000, 76.000)	79.000 (73.000, 86.000)	73.000 (66.000, 80.000)	
Min - Max	32.000 - 98.000	37.000 - 123.000	32.000 - 123.000	
Missing	0	0	0	
Systolic Blood Pressure				< 0.001
Mean (SD)	112.889 (10.623)	148.099 (16.249)	125.044 (21.103)	
Median (Q1, Q3)	114.000 (105.000, 121.000)	143.000 (136.000, 154.500)	122.000 (110.000, 137.000)	
Min - Max	66.000 - 130.000	130.500 - 213.000	66.000 - 213.000	
Missing	0	0	0	
Age				< 0.001
Mean (SD)	45.418 (13.395)	57.025 (12.589)	49.425 (14.233)	
Median (Q1, Q3)	43.000 (35.000, 53.105)	56.590 (49.000, 66.000)	48.000 (38.000, 59.789)	
Min - Max	20.000 - 92.000	19.000 - 91.970	19.000 - 92.000	
Missing	0	0	0	
PC1				< 0.001
Mean (SD)	0.002 (0.022)	-0.002 (0.023)	0.001 (0.023)	
Median (Q1, Q3)	0.005 (-0.015, 0.021)	-0.002 (-0.021, 0.018)	0.003 (-0.017, 0.020)	
Min - Max	-0.070 - 0.046	-0.053 - 0.044	-0.070 - 0.046	
Missing	0	0	0	
PC2				< 0.001
Mean (SD)	0.002 (0.024)	-0.002 (0.021)	0.001 (0.023)	
Median (Q1, Q3)	-0.003 (-0.016, 0.014)	-0.008 (-0.016, 0.007)	-0.005 (-0.016, 0.012)	
Min - Max	-0.035 - 0.109	-0.034 - 0.097	-0.035 - 0.109	
Missing	0	0	0	
PC3				0.090
Mean (SD)	-0.001 (0.023)	0.001 (0.023)	-0.000 (0.023)	
Median (Q1, Q3)	0.001 (-0.016, 0.015)	0.002 (-0.014, 0.016)	0.001 (-0.015, 0.016)	
Min - Max	-0.073 - 0.065	-0.073 - 0.069	-0.073 - 0.069	
Missing	0	0	0	
PC4				0.157
Mean (SD)	0.001 (0.023)	-0.001 (0.023)	0.000 (0.023)	
Median (Q1, Q3)	0.002 (-0.014, 0.016)	-0.001 (-0.016, 0.015)	0.000 (-0.015, 0.016)	
Min - Max	-0.082 - 0.066	-0.069 - 0.063	-0.082 - 0.066	
Missing	0	0	0	
PC5				0.467
Mean (SD)	0.001 (0.024)	-0.001 (0.021)	0.000 (0.023)	

	0 (N=1212)	1 (N=639)	Total (N=1851)	p value
Median (Q1, Q3)	-0.000 (-0.014, 0.015)	0.001 (-0.014, 0.014)	0.000 (-0.014, 0.014)	
Min - Max	-0.080 - 0.098	-0.066 - 0.069	-0.080 - 0.098	
Missing	0	0	0	
PC6				0.714
Mean (SD)	-0.001 (0.024)	0.001 (0.020)	-0.000 (0.023)	
Median (Q1, Q3)	0.002 (-0.012, 0.015)	0.002 (-0.010, 0.013)	0.002 (-0.011, 0.014)	
Min - Max	-0.122 - 0.057	-0.112 - 0.051	-0.122 - 0.057	
Missing	0	0	0	
PC7				0.551
Mean (SD)	0.000 (0.022)	-0.001 (0.024)	0.000 (0.023)	
Median (Q1, Q3)	0.004 (-0.008, 0.014)	0.004 (-0.009, 0.014)	0.004 (-0.009, 0.014)	
Min - Max	-0.115 - 0.052	-0.121 - 0.053	-0.121 - 0.053	
Missing	0	0	0	
PC8				0.823
Mean (SD)	0.000 (0.023)	-0.000 (0.023)	-0.000 (0.023)	
Median (Q1, Q3)	0.001 (-0.015, 0.016)	0.000 (-0.016, 0.015)	0.000 (-0.015, 0.016)	
Min - Max	-0.072 - 0.076	-0.071 - 0.075	-0.072 - 0.076	
Missing	0	0	0	
PC9				0.138
Mean (SD)	0.000 (0.023)	-0.001 (0.023)	0.000 (0.023)	
Median (Q1, Q3)	0.000 (-0.014, 0.015)	-0.002 (-0.015, 0.012)	-0.001 (-0.014, 0.014)	
Min - Max	-0.072 - 0.106	-0.071 - 0.075	-0.072 - 0.106	
Missing	0	0	0	
PC10				0.729
Mean (SD)	-0.000 (0.022)	0.000 (0.023)	-0.000 (0.023)	
Median (Q1, Q3)	-0.000 (-0.016, 0.015)	0.000 (-0.016, 0.016)	0.000 (-0.016, 0.016)	
Min - Max	-0.077 - 0.077	-0.075 - 0.072	-0.077 - 0.077	
Missing	0	0	0	

```
sex_table <- tableby(sex_fmla, data = phenotype, control=my_controls)
summary(sex_table, labelTranslations = my_labels, title = "Summary Statistics for Phenotype Data By Sex
```

Table 2: Summary Statistics for Phenotype Data By Sex

	1 (N=702)	2 (N=1241)	Total (N=1943)	p value
Diastolic Blood Pressure				< 0.001
Mean (SD)	76.619 (11.939)	71.720 (10.067)	73.469 (11.022)	
Median (Q1, Q3)	76.000 (69.000, 83.000)	71.000 (65.000, 78.000)	73.000 (66.000, 80.000)	
Min - Max	42.000 - 123.000	32.000 - 115.000	32.000 - 123.000	
Missing	41	51	92	
Systolic Blood Pressure				< 0.001
Mean (SD)	127.914 (19.799)	123.450 (21.637)	125.044 (21.103)	
Median (Q1, Q3)	125.000 (114.000, 139.000)	120.000 (107.000, 136.000)	122.000 (110.000, 137.000)	
Min - Max	66.000 - 203.000	79.000 - 213.000	66.000 - 213.000	
Missing	41	51	92	

	1 (N=702)	2 (N=1241)	Total (N=1943)	p value
Age				< 0.001
Mean (SD)	50.898 (14.243)	48.700 (14.188)	49.485 (14.243)	
Median (Q1, Q3)	50.110 (40.000, 61.000)	47.000 (38.000, 59.000)	48.000 (38.000, 60.000)	
Min - Max	19.000 - 87.000	22.190 - 92.000	19.000 - 92.000	
Missing	37	44	81	
PC1				0.829
Mean (SD)	-0.000 (0.023)	0.000 (0.022)	-0.000 (0.023)	
Median (Q1, Q3)	0.001 (-0.018, 0.020)	0.002 (-0.018, 0.019)	0.002 (-0.018, 0.019)	
Min - Max	-0.061 - 0.045	-0.070 - 0.046	-0.070 - 0.046	
Missing	0	0	0	
PC2				0.018
Mean (SD)	-0.001 (0.023)	0.001 (0.023)	0.000 (0.023)	
Median (Q1, Q3)	-0.008 (-0.017, 0.009)	-0.004 (-0.016, 0.011)	-0.006 (-0.016, 0.010)	
Min - Max	-0.035 - 0.109	-0.034 - 0.099	-0.035 - 0.109	
Missing	0	0	0	
PC3				0.080
Mean (SD)	0.001 (0.022)	-0.001 (0.023)	-0.000 (0.023)	
Median (Q1, Q3)	0.002 (-0.013, 0.016)	0.001 (-0.016, 0.015)	0.001 (-0.015, 0.016)	
Min - Max	-0.073 - 0.069	-0.073 - 0.065	-0.073 - 0.069	
Missing	0	0	0	
PC4				0.367
Mean (SD)	-0.001 (0.022)	0.000 (0.023)	0.000 (0.023)	
Median (Q1, Q3)	-0.001 (-0.015, 0.015)	0.001 (-0.015, 0.016)	0.000 (-0.015, 0.015)	
Min - Max	-0.069 - 0.054	-0.082 - 0.066	-0.082 - 0.066	
Missing	0	0	0	
PC5				0.088
Mean (SD)	-0.001 (0.022)	0.001 (0.023)	-0.000 (0.023)	
Median (Q1, Q3)	-0.001 (-0.016, 0.013)	0.000 (-0.014, 0.016)	-0.000 (-0.014, 0.014)	
Min - Max	-0.080 - 0.070	-0.080 - 0.098	-0.080 - 0.098	
Missing	0	0	0	
PC6				0.224
Mean (SD)	0.001 (0.021)	-0.001 (0.023)	0.000 (0.023)	
Median (Q1, Q3)	0.002 (-0.010, 0.015)	0.002 (-0.012, 0.014)	0.002 (-0.011, 0.014)	
Min - Max	-0.112 - 0.054	-0.122 - 0.057	-0.122 - 0.057	
Missing	0	0	0	
PC7				0.208
Mean (SD)	0.001 (0.023)	-0.000 (0.022)	0.000 (0.023)	
Median (Q1, Q3)	0.004 (-0.008, 0.015)	0.003 (-0.009, 0.014)	0.004 (-0.009, 0.014)	
Min - Max	-0.121 - 0.053	-0.115 - 0.052	-0.121 - 0.053	
Missing	0	0	0	
PC8				0.787
Mean (SD)	0.000 (0.023)	-0.000 (0.023)	0.000 (0.023)	
Median (Q1, Q3)	0.001 (-0.015, 0.016)	0.001 (-0.015, 0.015)	0.001 (-0.015, 0.016)	
Min - Max	-0.072 - 0.075	-0.071 - 0.076	-0.072 - 0.076	
Missing	0	0	0	
PC9				0.540
Mean (SD)	-0.000 (0.023)	0.000 (0.023)	-0.000 (0.023)	
Median (Q1, Q3)	-0.001 (-0.015, 0.015)	-0.000 (-0.013, 0.013)	-0.001 (-0.014, 0.014)	
Min - Max	-0.068 - 0.106	-0.072 - 0.086	-0.072 - 0.106	
Missing	0	0	0	

	1 (N=702)	2 (N=1241)	Total (N=1943)	p value
PC10				0.491
Mean (SD)	-0.000 (0.023)	0.000 (0.023)	-0.000 (0.023)	
Median (Q1, Q3)	-0.000 (-0.015, 0.016)	0.001 (-0.015, 0.016)	0.000 (-0.015, 0.016)	
Min - Max	-0.075 - 0.072	-0.077 - 0.077	-0.077 - 0.077	
Missing	0	0	0	

```
bpmed_table <- tableby(bpmed_fmla, data = phenotype, control=my_controls)
summary(bpmed_table, labelTranslations = my_labels, title = "Summary Statistics for Phenotype Data By Bl
```

Table 3: Summary Statistics for Phenotype Data By Blood Pressure Medication Status

	0 (N=260)	1 (N=147)	Total (N=407)	p value
Diastolic Blood Pressure				0.061
Mean (SD)	73.303 (11.161)	74.711 (11.126)	73.811 (11.155)	
Median (Q1, Q3)	73.000 (66.000, 80.625)	76.000 (67.500, 83.000)	74.000 (67.000, 81.750)	
Min - Max	49.000 - 115.000	42.000 - 109.000	42.000 - 115.000	
Missing	0	0	0	
Systolic Blood Pressure				< 0.001
Mean (SD)	126.839 (18.159)	145.367 (21.082)	133.531 (21.203)	
Median (Q1, Q3)	125.000 (114.000, 136.125)	143.000 (132.750, 156.000)	131.000 (118.000, 145.000)	
Min - Max	91.000 - 197.000	100.000 - 212.000	91.000 - 212.000	
Missing	0	0	0	
Age				< 0.001
Mean (SD)	50.476 (13.539)	61.490 (12.521)	54.454 (14.191)	
Median (Q1, Q3)	48.990 (42.000, 59.000)	62.248 (52.000, 71.647)	53.000 (44.270, 64.703)	
Min - Max	19.000 - 88.630	35.000 - 91.970	19.000 - 91.970	
Missing	0	0	0	
PC1				0.966
Mean (SD)	-0.014 (0.019)	-0.014 (0.018)	-0.014 (0.019)	
Median (Q1, Q3)	-0.015 (-0.027, -0.003)	-0.015 (-0.026, -0.004)	-0.015 (-0.026, -0.003)	
Min - Max	-0.061 - 0.045	-0.052 - 0.040	-0.061 - 0.045	
Missing	0	0	0	
PC2				0.917
Mean (SD)	-0.014 (0.006)	-0.014 (0.007)	-0.014 (0.006)	
Median (Q1, Q3)	-0.015 (-0.018, -0.011)	-0.015 (-0.018, -0.011)	-0.015 (-0.018, -0.011)	
Min - Max	-0.032 - 0.005	-0.029 - 0.015	-0.032 - 0.015	
Missing	0	0	0	
PC3				0.659
Mean (SD)	0.003 (0.021)	0.003 (0.022)	0.003 (0.022)	
Median (Q1, Q3)	0.004 (-0.011, 0.018)	0.003 (-0.012, 0.017)	0.003 (-0.012, 0.018)	

	0 (N=260)	1 (N=147)	Total (N=407)	p value
Min - Max	-0.056 - 0.055	-0.059 - 0.059	-0.059 - 0.059	
Missing	0	0	0	
PC4				< 0.001
Mean (SD)	0.004 (0.022)	-0.003 (0.022)	0.002 (0.022)	
Median (Q1, Q3)	0.006 (-0.009, 0.021)	-0.004 (-0.017, 0.013)	0.003 (-0.013, 0.018)	
Min - Max	-0.061 - 0.053	-0.055 - 0.054	-0.061 - 0.054	
Missing	0	0	0	
PC5				0.416
Mean (SD)	0.001 (0.021)	-0.001 (0.022)	0.000 (0.021)	
Median (Q1, Q3)	0.001 (-0.012, 0.016)	0.002 (-0.016, 0.014)	0.001 (-0.013, 0.015)	
Min - Max	-0.072 - 0.049	-0.060 - 0.056	-0.072 - 0.056	
Missing	0	0	0	
PC6				0.715
Mean (SD)	0.002 (0.017)	0.002 (0.018)	0.002 (0.017)	
Median (Q1, Q3)	0.001 (-0.009, 0.012)	0.003 (-0.011, 0.014)	0.002 (-0.010, 0.013)	
Min - Max	-0.041 - 0.051	-0.033 - 0.042	-0.041 - 0.051	
Missing	0	0	0	
PC7				0.407
Mean (SD)	0.006 (0.018)	0.003 (0.021)	0.005 (0.019)	
Median (Q1, Q3)	0.007 (-0.004, 0.018)	0.006 (-0.007, 0.016)	0.007 (-0.004, 0.017)	
Min - Max	-0.063 - 0.053	-0.081 - 0.046	-0.081 - 0.053	
Missing	0	0	0	
PC8				0.307
Mean (SD)	-0.000 (0.022)	-0.003 (0.023)	-0.001 (0.023)	
Median (Q1, Q3)	0.000 (-0.016, 0.014)	-0.002 (-0.015, 0.011)	-0.001 (-0.016, 0.013)	
Min - Max	-0.061 - 0.076	-0.071 - 0.055	-0.071 - 0.076	
Missing	0	0	0	
PC9				0.219
Mean (SD)	0.000 (0.019)	-0.003 (0.022)	-0.001 (0.020)	
Median (Q1, Q3)	0.000 (-0.013, 0.013)	-0.003 (-0.016, 0.009)	-0.001 (-0.014, 0.012)	
Min - Max	-0.046 - 0.066	-0.056 - 0.048	-0.056 - 0.066	
Missing	0	0	0	
PC10				0.922
Mean (SD)	0.003 (0.022)	0.003 (0.021)	0.003 (0.022)	
Median (Q1, Q3)	0.003 (-0.012, 0.019)	0.004 (-0.010, 0.017)	0.004 (-0.012, 0.018)	
Min - Max	-0.060 - 0.077	-0.054 - 0.052	-0.060 - 0.077	
Missing	0	0	0	

```
gen_table <- tableby(~DBP + SBP + AGE, data=phenotype, control=my_controls)
summary(gen_table, labelTranslations = my_labels, title="Summary Statistics for Phenotype Data")
```

Table 4: Summary Statistics for Phenotype Data

	Overall (N=1943)
Diastolic Blood Pressure	
Mean (SD)	73.469 (11.022)
Median (Q1, Q3)	73.000 (66.000, 80.000)
Min - Max	32.000 - 123.000

	Overall (N=1943)
Missing	92
Systolic Blood Pressure	
Mean (SD)	125.044 (21.103)
Median (Q1, Q3)	122.000 (110.000, 137.000)
Min - Max	66.000 - 213.000
Missing	92
Age	
Mean (SD)	49.485 (14.243)
Median (Q1, Q3)	48.000 (38.000, 60.000)
Min - Max	19.000 - 92.000
Missing	81

```
summary(freqlist(~SEX, data=phenotype), title="Frequency Table By Sex for Phenotype Data", labelTransla
```

Table 5: Frequency Table By Sex for Phenotype Data

Sex	Freq	Cumulative Freq	Percent	Cumulative Percent
1	702	702	36.13	36.13
2	1241	1943	63.87	100.00

```
summary(freqlist(~BPMED, data=phenotype), title="Frequency Table By Blood Pressure Medication Status fo
```

Table 6: Frequency Table By Blood Pressure Medication Status
for Phenotype Data

Blood Pressure Medication Status	Freq	Cumulative Freq	Percent	Cumulative Percent
0	260	260	13.38	13.38
1	147	407	7.57	20.95
NA	1536	1943	79.05	100.00

```
summary(freqlist(~HTN, data=phenotype), title="Frequency Table By Hypertension Status for Phenotype Dat
```

Table 7: Frequency Table By Hypertension Status for Phenotype
Data

Hypertension Status	Freq	Cumulative Freq	Percent	Cumulative Percent
0	1212	1212	62.38	62.38
1	639	1851	32.89	95.27
NA	92	1943	4.73	100.00

```
```