

Supplementary material for Osakwe CE, et al. Heart rate variability on antihypertensive drugs in black patients living in sub-Saharan Africa. Blood Pressure, 2014;23:174–180.

Supplementary Table I. Heart rate variability based on autoregressive modelling by type of analysis and randomization group.

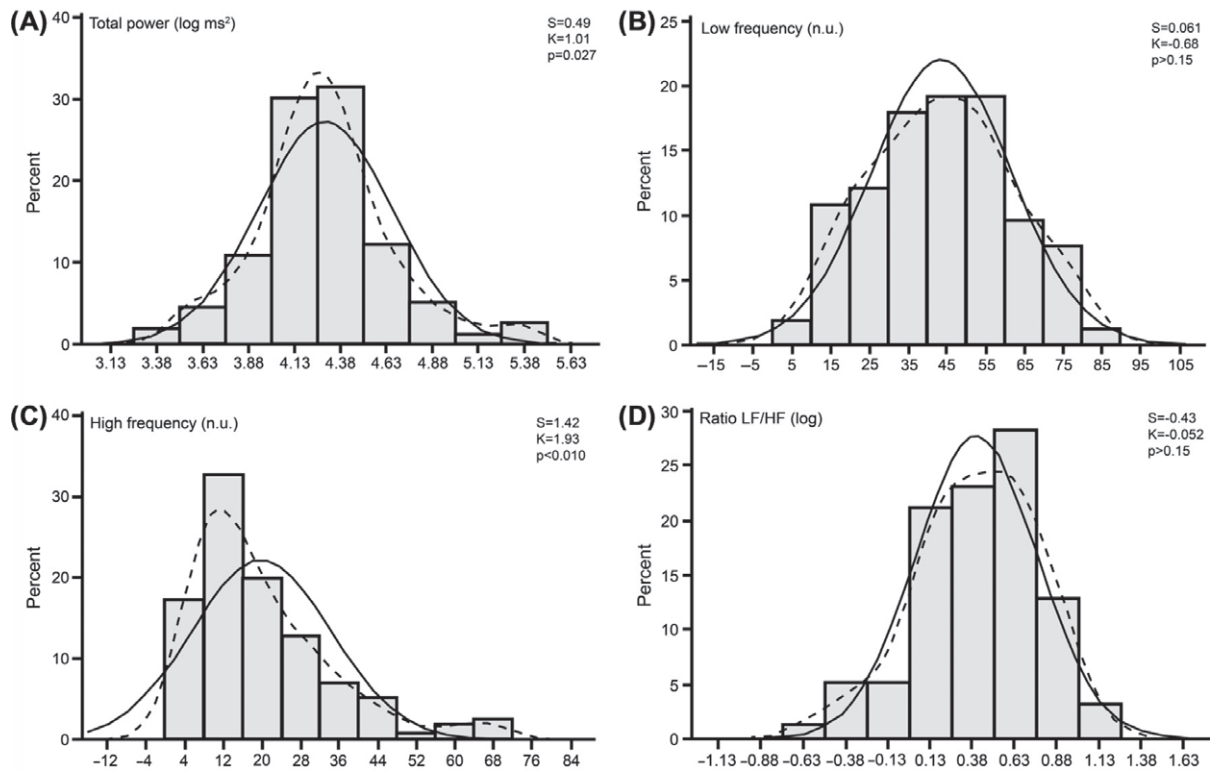
Characteristic Randomization	Type of analysis			
	All patients		Cohort	
	Old	New	Old	New
Number	72	84	39	47
Total power (log ms <sup>2</sup> )	3.94 ± 0.33	3.96 ± 0.42	3.97 ± 0.31	3.93 ± 0.34
(Geometric mean)	8710	9120	9333	8511
Low-frequency power (nu)	42.5 ± 18.3	43.8 ± 15.5	45.5 ± 19.4	46.6 ± 13.9
High-frequency power (nu)	18.8 ± 14.3	20.3 ± 14.0	20.4 ± 16.7	19.3 ± 13.4
Low- to high-frequency ratio (log)	0.42 ± 0.37	0.40 ± 0.34	0.41 ± 0.42	0.45 ± 0.33
(Geometric mean)	2.63	2.51	2.57	2.81

The overall analysis encompasses patients with at least one measurement of heart rate variability after randomization and the cohort analysis patients with all scheduled visits available for analysis. Old and new refer to single-pill combinations of hydrochlorothiazide plus bisoprolol and valsartan plus amlodipine. Values are mean ± SD. Between-group differences among all patients ( $p \geq 0.50$ ) and among those in the cohort analysis ( $p \geq 0.32$ ) were not significant.

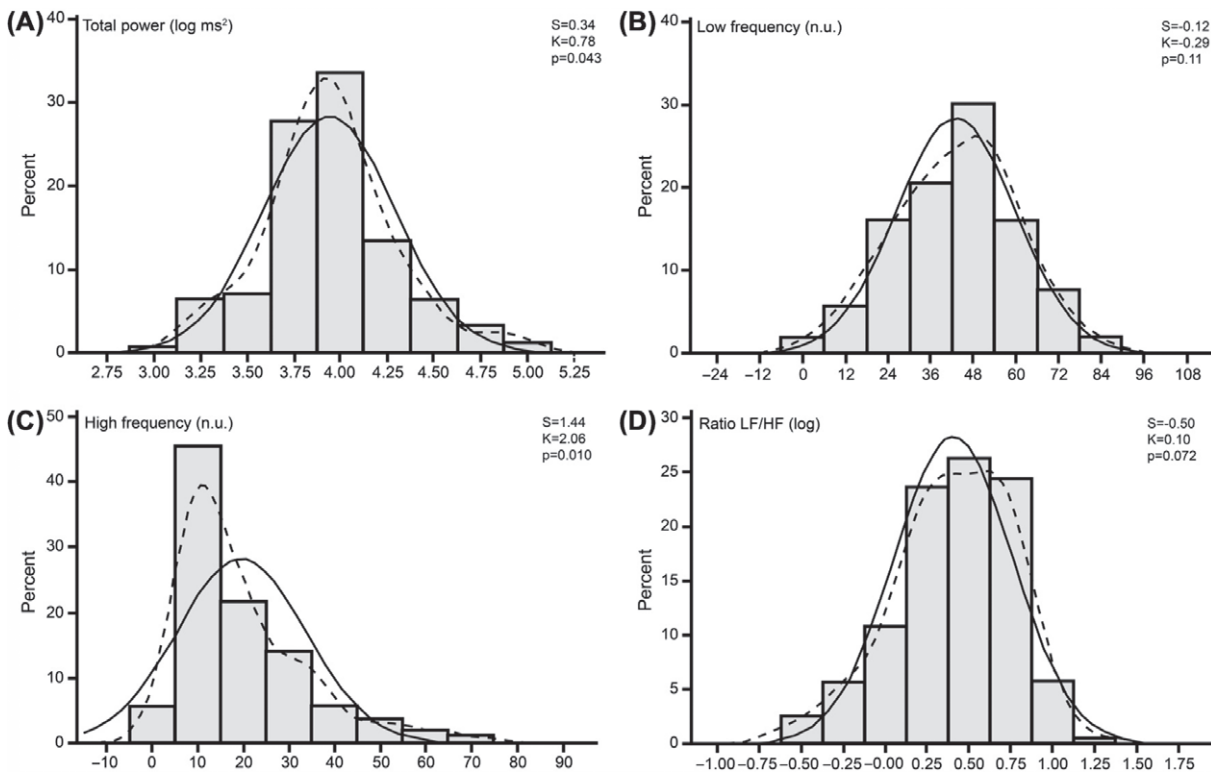
Supplementary Table II. Changes in heart rate and heart rate variability by type of analysis and randomization group.

Characteristic Randomization	Type of analysis							
	All patients				Cohort			
	Old	New	Δ (CI)	<i>p</i>	Old	New	Δ (CI)	<i>p</i>
Number	72	84			39	47		
Heart rate (beats/min)	− 9.5 ± 1.6 <sup>‡</sup>	− 2.2 ± 1.4	7.3 (5.6 to 9.4)	< 0.0001	− 10.1 ± 1.8 <sup>‡</sup>	− 2.4 ± 1.9	7.3 (4.4 to 10.0)	< 0.0001
Total power (log ms <sup>2</sup> )	− 0.16 ± 0.05 <sup>†</sup>	− 0.04 ± 0.06	0.14 (0.05 to 0.23)	0.0029	− 0.11 ± 0.07	− 0.01 ± 0.06	0.07 (− 0.04 to 0.18)	0.22
(Percent)	− 5.1	− 1.0	4.1 (1.5 to 6.7)		− 2.8	− 0.25	2.5 (− 1.4 to 6.5)	
Low-frequency power (nu)	− 2.6 ± 2.6	− 0.44 ± 2.1	3.5 (0.02 to 6.9)	0.050	− 3.3 ± 3.5	− 3.2 ± 2.6	3.7 (− 0.63 to 8.0)	0.09
High-frequency power (nu)	6.2 ± 2.2 <sup>†</sup>	2.3 ± 1.9	− 2.7 (− 5.7 to 0.35)	0.085	4.6 ± 3.2	3.0 ± 2.5	− 2.3 (− 6.3 to 1.8)	0.28
Low- to high-frequency ratio	− 0.16 ± 0.06 <sup>†</sup>	− 0.06 ± 0.05	0.09 (0.02 to 0.16)	0.020	− 0.15 ± 0.08	− 0.10 ± 0.06	0.08 (− 0.01 to 0.18)	0.097
(Percent)	− 38.1	− 14.5	23.6 (3.9 to 42.0)		− 36.6	− 22.2	14.4 (− 2.4 to 31.2)	

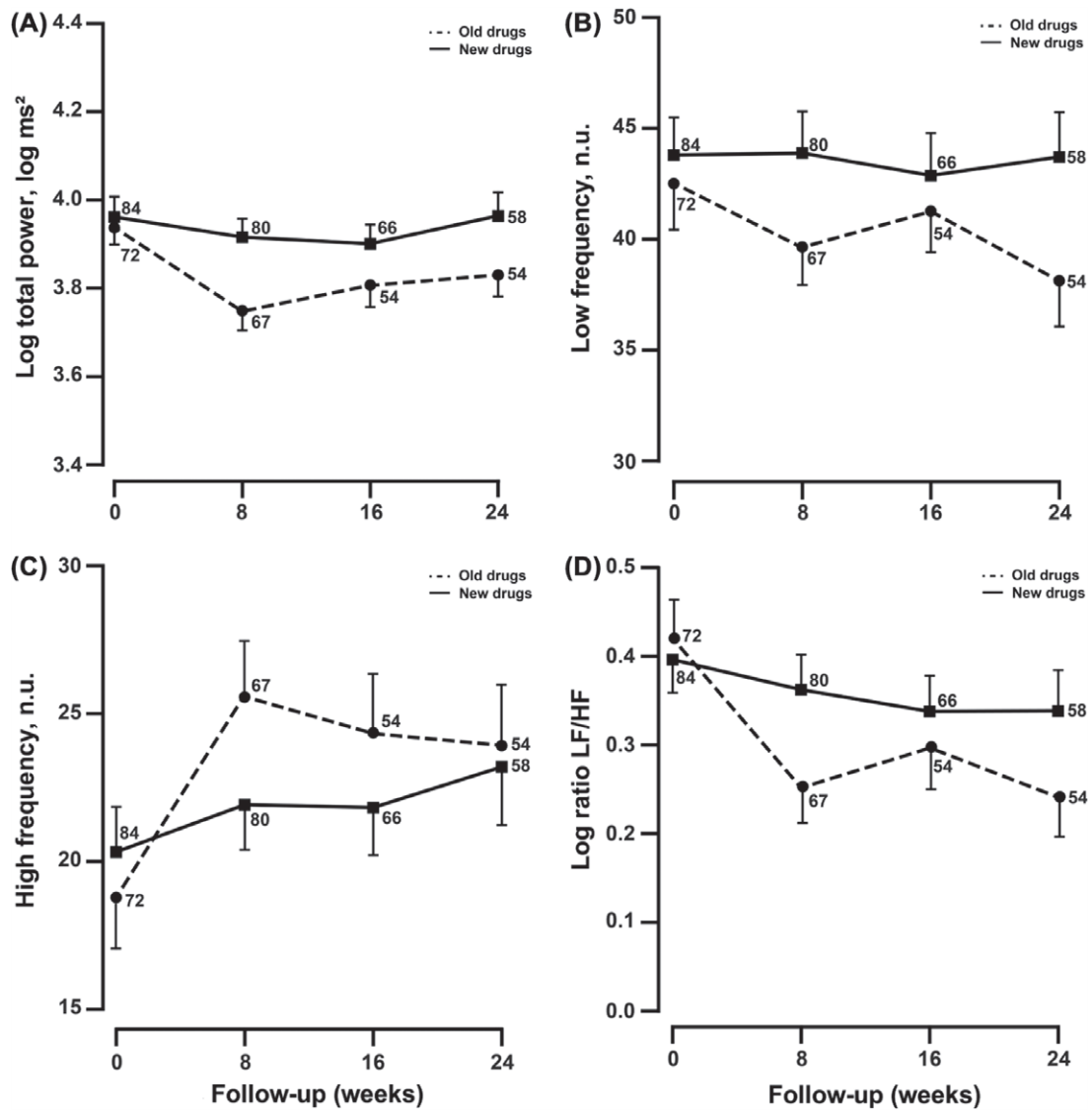
The overall analysis encompasses patients with at least one measurement of heart rate variability after randomization and the cohort analysis patients with all scheduled visits available for analysis. Heart rate variability was analyzed using autoregressive modelling. Within-group changes (follow-up minus baseline) are mean ± SE. Δ (CI) refers to the baseline-adjusted differences 95% confidence interval) of the treatment effects (new minus old). *p*-values were computed using a mixed model. Significance of the within-group changes \* $p \leq 0.05$ ; <sup>†</sup> $p \leq 0.01$ ; <sup>‡</sup> $p \leq 0.001$ .



Supplementary Figure 1. Frequency distributions of total (A), low-frequency (B) and high-frequency (C) power and the low-to-high-frequency ratio (D) at randomization, based on the fast Fourier transform.  $S$  and  $K$  are the coefficients of skewness and kurtosis. The  $p$ -value is for departure of the actually observed distribution (Kernel distribution; dotted line) from normality (full line).



Supplementary Figure 2. Frequency distributions of total (A), low-frequency (B) and high-frequency (C) power and the low-to-high-frequency ratio (D) at randomization, based on the autoregressive modelling.  $S$  and  $K$  are the coefficients of skewness and kurtosis. The  $p$ -value is for departure of the actually observed distribution (Kernel distribution; dotted line) from normality (full line).



Supplementary Figure 3. Total (A), low-frequency (B) and high-frequency (C) power and the low-to-high-frequency ratio (D) at randomization and during follow-up in patients randomized to old drugs ( $n = 72$ ) or new drugs ( $n = 84$ ). Heart rate variability was analyzed using autoregressive modelling. Plotted values are mean  $\pm$  SE. The number of patients contributing to the means is given.  $p$ -values denote the significance of the between-group differences derived from a mixed model. Significance of the between-group differences at individual visits: \* $p \leq 0.05$ ; † $p \leq 0.01$ ; ‡ $p \leq 0.001$ .