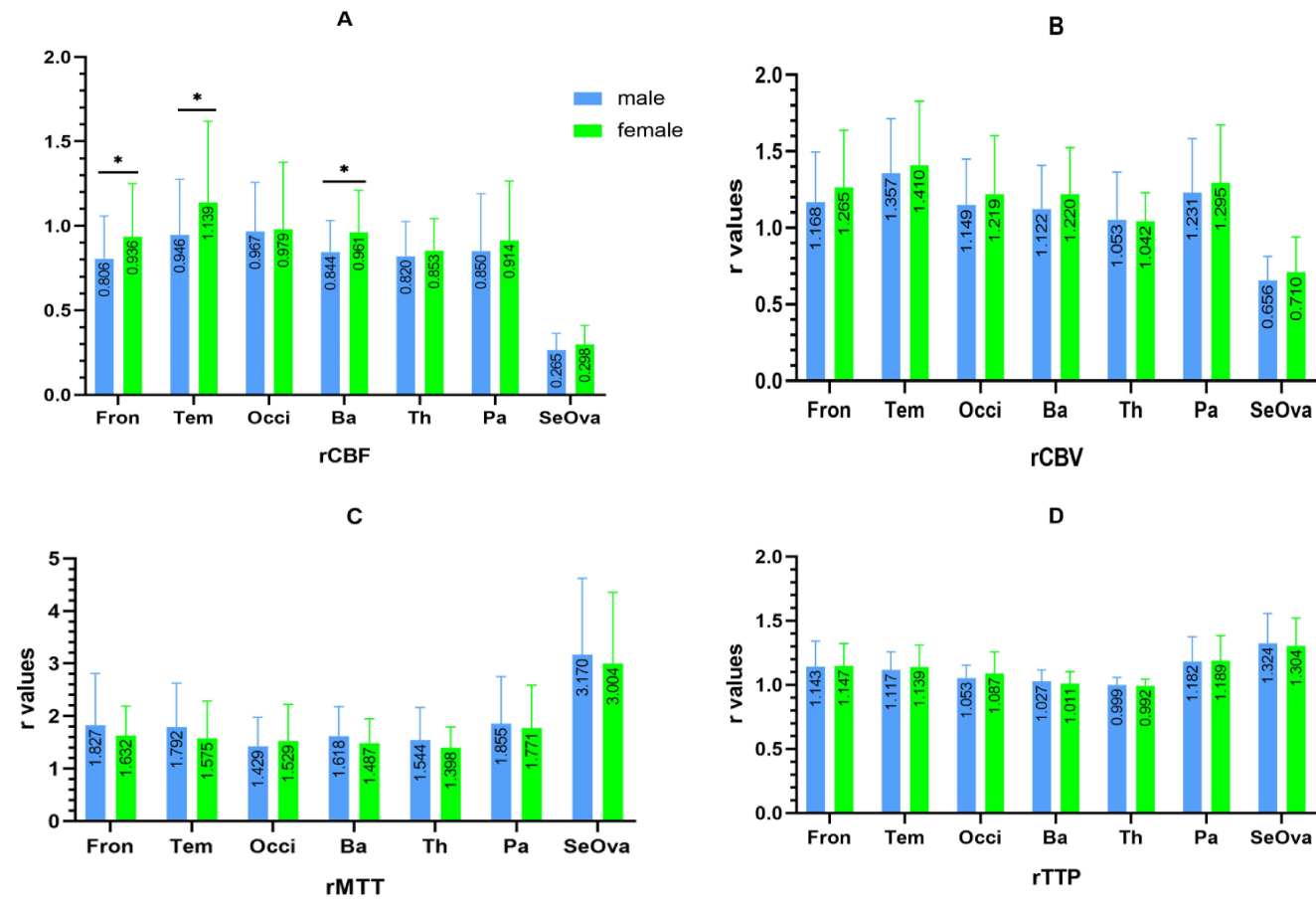
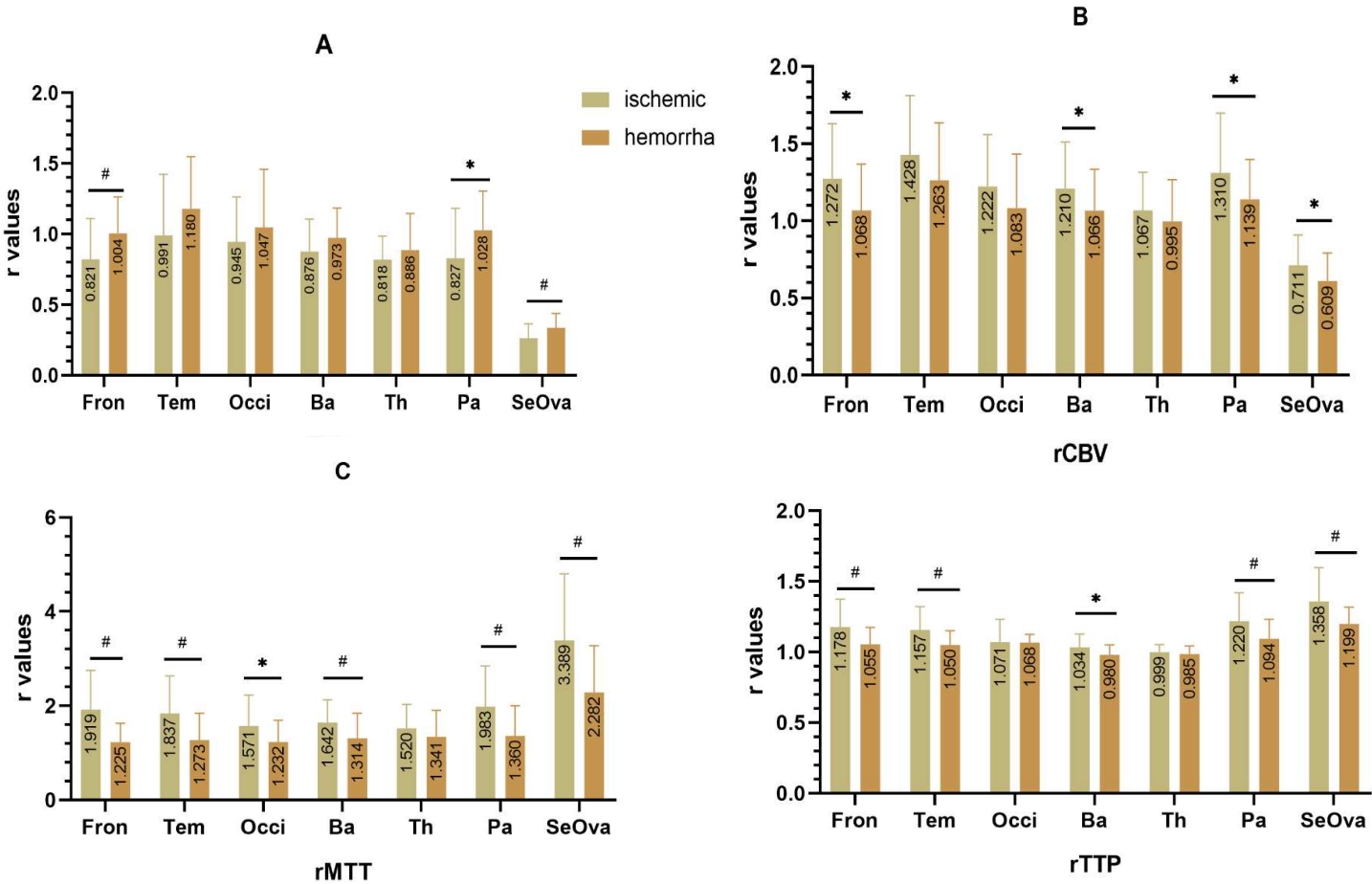
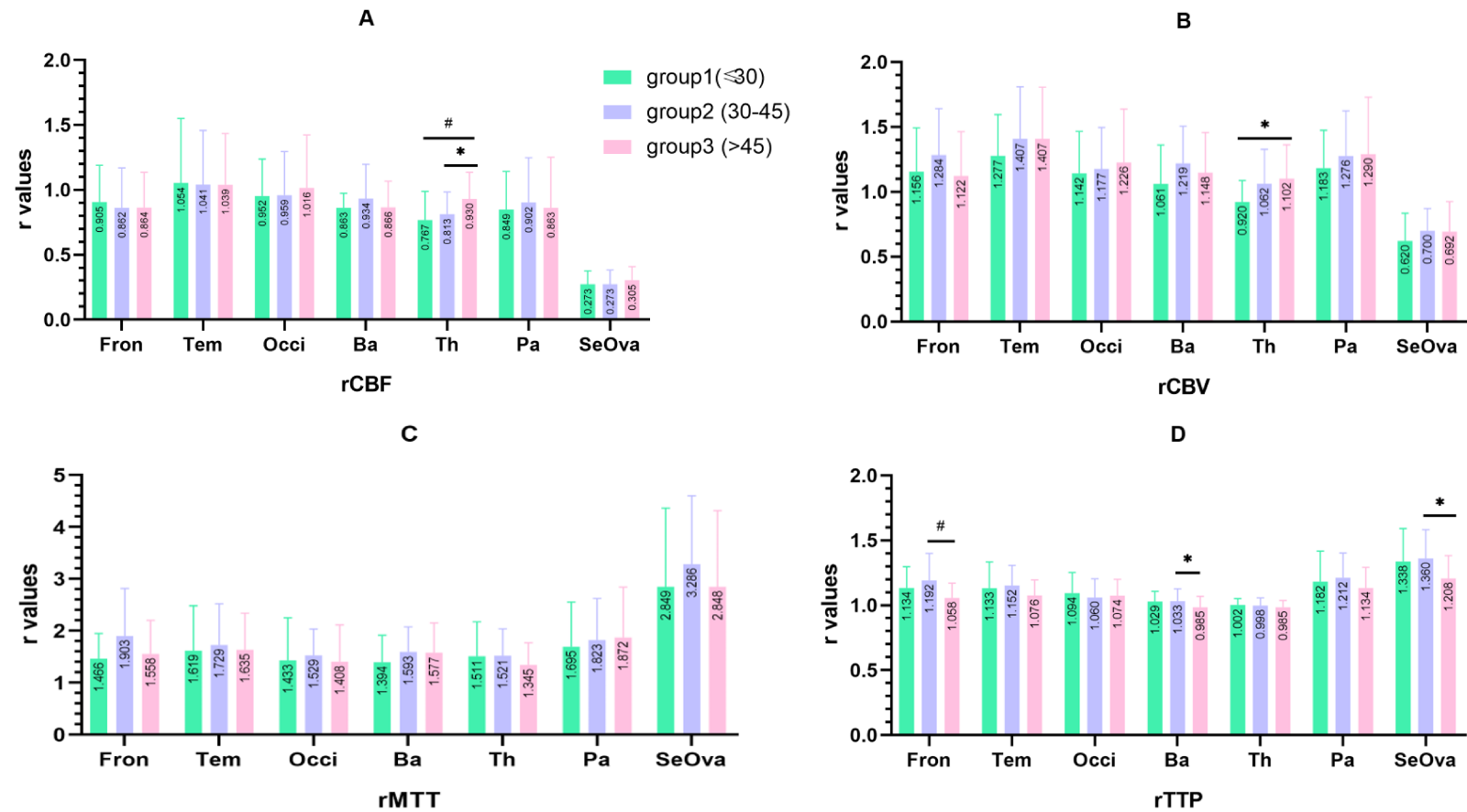


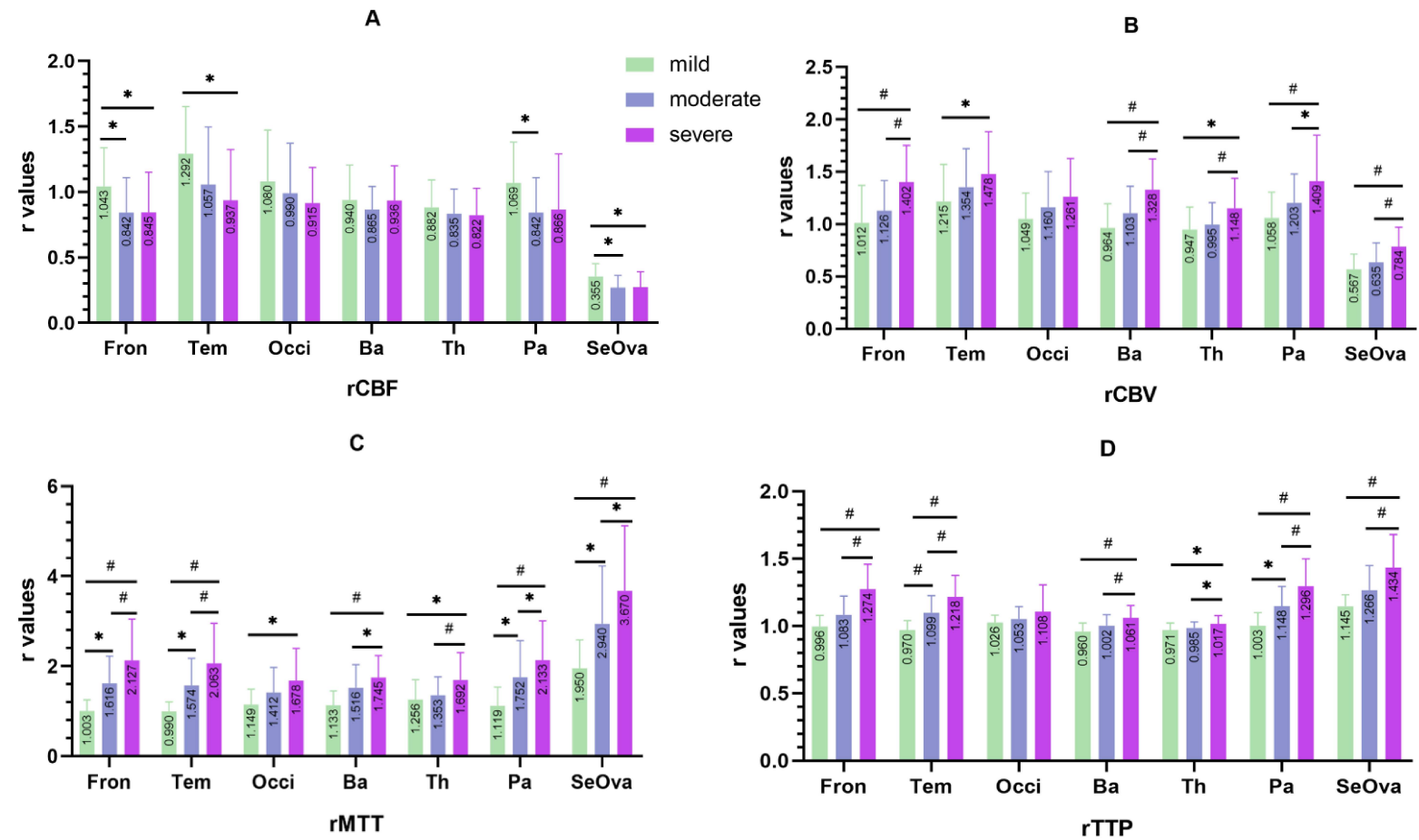
Supplementary Figure I. Univariate analysis of hemodynamic condition between gender and clinical type.



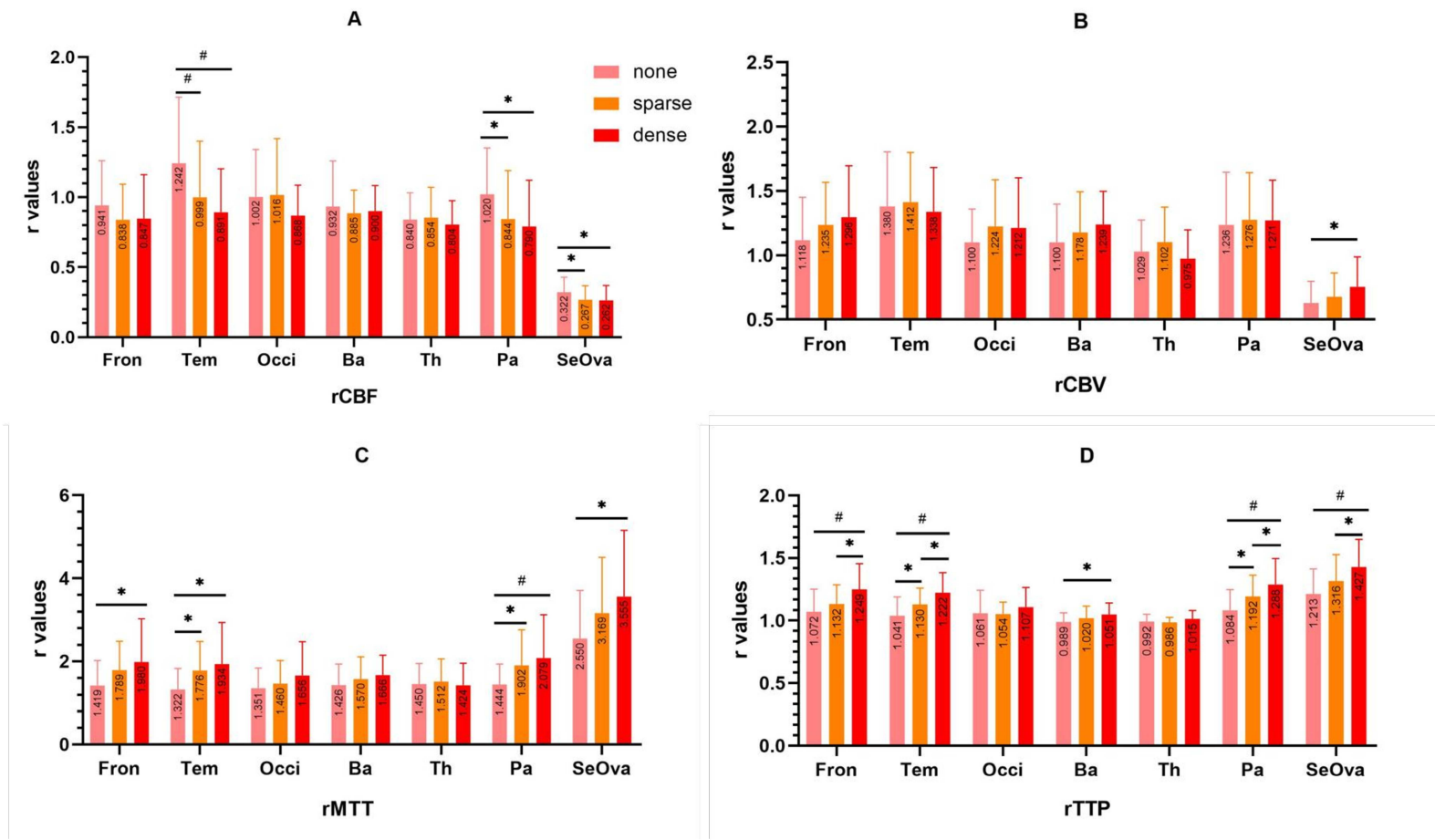


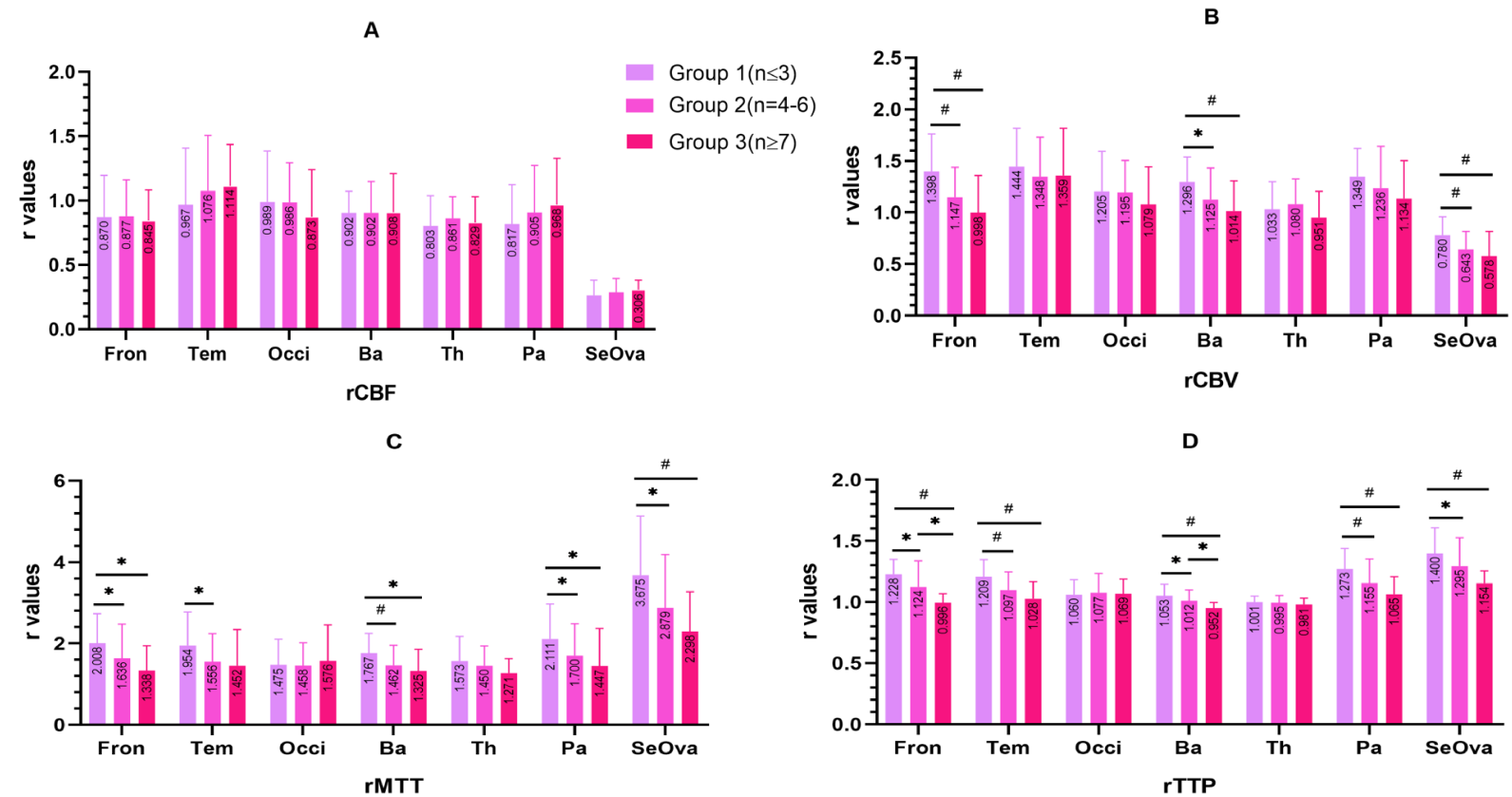
Supplementary Figure II. Univariate analysis of hemodynamic condition between age and degree of arterial stenosis.





Supplementary Figure III. Univariate analysis of hemodynamic condition between compensatory artery numbers and moyamoya vessels.





Supplementary Figure IV. Multivariate analysis of hemodynamic condition between gender, clinical type, age, arterial stenosis, moyamoya vessels and compensatory artery numbers.

	Gen		Ag		CT		ST		MV		CV	
	Beta [#] (95%CI)	P	Beta [#] (95%CI)	P	Beta [#] (95%CI)	P	Beta [#] (95%CI)	P	Beta [#] (95%CI)	P	Beta [#] (95%CI)	P
F-rCBF	0.243 (0.023-0.259)	0.020	-0.06 (-0.116-0.065)	0.571	0.290 (0.054-0.323)	0.007	-0.085 (-0.135-0.063)	0.468	-0.122 (-0.138-0.044)	0.306	-0.087 (-0.139-0.061)	0.444
F-rCBV	0.131 (-0.039-0.223)	0.166	0.025 (-0.087-0.113)	0.796	-0.17 (-0.283-0.015)	0.077	0.321 (0.056-0.276)	0.003	-0.064 (-0.131-0.071)	0.558	-0.064 (-0.276 - -0.054)	0.004
F-rMTT	-0.138 (-0.505-0.064)	0.128	0.088 (-0.114-0.323)	0.343	-0.329 (-0.912 - -0.263)	0.001	0.327 (0.145-0.623)	0.002	0.073 (-0.142-0.298)	0.483	-0.149 (-0.424-0.059)	0.137
F-rTTP	0.012 (-0.059-0.068)	0.893	-0.069 (-0.068-0.03)	0.438	-0.203 (-0.157 - -0.012)	0.023	0.412 (0.059-0.166)	<0.001	0.076 (-0.03-0.068)	0.445	-0.204 (-0.012, -0.004)	0.336
T-rCBF	0.239 (0.033-0.366)	0.019	-0.084 (-0.18-0.075)	0.413	0.194 (-0.008-0.372)	0.06	-0.104 (-0.204-0.075)	0.362	-0.277 (-0.285 - -0.027)	0.018	0.002 (-0.14-0.142)	0.987
T-rCBV	0.067 (-0.11-0.213)	0.526	0.114 (-0.058-0.189)	0.295	-0.136 (-0.301-0.067)	0.209	0.261 (0.013-0.283)	0.033	-0.161 (-0.208-0.042)	0.189	-0.087 (-0.188-0.086)	0.461
T-rMTT	-0.147 (-0.513-0.058)	0.117	0.084 (-0.121-0.316)	0.376	-0.268 (-0.791- -0.140)	0.006	0.323 (0.129-0.608)	0.003	0.132 (-0.084-0.358)	0.221	-0.094 (-0.354-0.13)	0.361
T-rTTP	0.067 (-0.032-0.074)	0.435	-0.018 (-0.045-0.036)	0.833	-0.214 (-0.136- -0.014)	0.016	0.349 (0.036-0.125)	0.001	0.198 (0.001-0.083)	0.047	-0.19 (-0.091 - -0.001)	0.048
O-rCBF	0.011 (-0.14-0.155)	0.919	0.06 (-0.082-0.144)	0.586	0.113 (-0.081-0.256)	0.305	-0.137 (-0.193-0.055)	0.269	-0.143 (-0.18-0.048)	0.255	-0.201 (-0.231-0.02)	0.097
O-rCBV	0.1 (-0.077-0.215)	0.352	0.124 (-0.048-0.175)	0.26	-0.133 (-0.269-0.064)	0.224	0.169 (-0.037-0.208)	0.171	0.07 (-0.081-0.145)	0.572	-0.022 (-0.135-0.112)	0.855
O-rMTT	0.087 (-0.145-0.362)	0.398	-0.002 (-0.196-0.192)	0.983	-0.19 (-0.553-0.025)	0.073	0.265 (0.029-0.455)	0.026	0.138 (-0.082-0.311)	0.248	0.19 (-0.035-0.396)	0.099
O-rTTP	0.152 (-0.017-0.103)	0.16	-0.021 (-0.05-0.042)	0.851	0.047 (-0.053-0.083)	0.668	0.255 (0.002-0.103)	0.04	0.073 (-0.033-0.06)	0.559	0.159 (-0.017-0.085)	0.183
Ba-rCBF	0.295 (0.039-0.227)	0.006	-0.024 (0.039-0.227)	0.826	0.246 (0.018-0.231)	0.023	0.166 (-0.024-0.134)	0.167	-0.107 (-0.105-0.04)	0.377	0.021 (-0.072-0.087)	0.858
Ba-rCBV	0.171 (-0.009-0.211)	0.071	0.155 (-0.015-0.153)	0.108	-0.113 (-0.201-0.05)	0.237	0.396 (0.08-0.265)	<0.001	-0.051 (-0.105-0.065)	0.637	-0.237 (-0.201 - -0.014)	0.025
Ba-rMTT	-0.143 (-0.34-0.048)	0.137	0.186 (-0.006-0.291)	0.06	-0.234 (-0.49 - -0.048)	0.018	0.266 (0.038-0.364)	0.016	-0.006 (-0.154-0.146)	0.958	-0.254 (-0.364 - -0.035)	0.018
Ba-rTTP	-0.098 (-0.052-0.017)	0.312	-0.099 (-0.04-0.013)	0.316	-0.212 (-0.082 - -0.004)	0.033	0.254 (0.005-0.063)	0.023	0.029 (-0.023-0.03)	0.791	-0.22 (-0.06 - -0.001)	0.042
Th-rCBF	0.101 (-0.043-0.122)	0.34	0.29 (0.022-0.148)	0.009	0.163 (-0.022-0.165)	0.133	-0.016 (-0.074-0.064)	0.895	0.025 (-0.057-0.07)	0.839	0.025 (-0.062-0.077)	0.829
Th-rCBV	-0.005 (-0.104-0.099)	0.957	0.237 (0.012-0.168)	0.024	-0.056 (-0.148-0.084)	0.587	0.399 (0.064-0.234)	0.001	-0.201 (-0.147-0.01)	0.087	-0.031 (-0.098-0.074)	0.778
Th-rMTT	-0.137 (-0.353-0.067)	0.18	-0.103 (-0.241-0.08)	0.322	-0.106 (-0.363-0.116)	0.307	0.339 (0.084-0.436)	0.004	-0.241 (-0.331,-0.006)	0.043	-0.138 (-0.288-0.068)	0.224
Th-rTTP	-0.051 (-0.029-0.018)	0.633	-0.074 (-0.024-0.012)	0.495	-0.072 (-0.035-0.018)	0.507	0.284 (0.004-0.043)	0.021	0.017 (-0.017-0.019)	0.888	0.013 (-0.019-0.021)	0.914
P-rCBF	0.121 (-0.059-0.226)	0.246	-0.057 (-0.238-0.08)	0.595	0.265 (0.043-0.368)	0.014	0.04 (-0.099-0.14)	0.736	-0.241 (-0.222,-0.001)	0.047	0.07 (-0.084-0.158)	0.544
P-rCBV	0.092 (-0.079-0.212)	0.366	0.133 (-0.039-0.183)	0.202	-0.131 (-0.272-0.059)	0.204	0.351 (0.065-0.309)	0.003	-0.145 (-0.183-0.042)	0.217	-0.153 (-0.208-0.309)	0.175
P-rMTT	-0.066 (-0.435-0.212)	0.496	0.158 (-0.047-0.448)	0.112	-0.274 (-0.892 - -0.154)	0.006	0.228 (0.014-0.557)	0.04	0.147 (-0.083-0.418)	0.186	-0.157 (-0.479-0.07)	0.142
P-rTTP	0.016 (-0.062-0.073)	0.861	0.013 (-0.048-0.055)	0.888	-0.208 (-0.166 - -0.013)	0.023	0.352 (0.043-0.156)	0.001	0.178 (-0.007-0.098)	0.086	-0.172 (-0.108-0.007)	0.084
Ova-rCBF	0.186 (-0.003-0.083)	0.071	0.066 (-0.023-0.043)	0.53	0.315 (0.026-0.124)	0.003	-0.03 (-0.041-0.031)	0.795	-0.156 (-0.055-0.011)	0.188	0.044 (-0.029-0.044)	0.699
Ova-rCBV	0.136 (-0.019-0.126)	0.149	0.209 (0.006-0.117)	0.031	-0.142 (-0.145-0.02)	0.138	0.312 (0.029-0.151)	0.004	0.037 (-0.047-0.066)	0.734	-0.281 (-0.146,-0.023)	0.008
Ova-rMTT	-0.081 (-0.742-0.294)	0.392	0.069 (-0.253-0.54)	0.474	-0.301 (-1.529 - -0.349)	0.002	0.24 (0.057-0.925)	0.027	0.085 (-0.242-0.558)	0.435	-0.224 (-0.916 - -0.337)	0.034
Ova-rTTP	-0.056 (-0.106-0.056)	0.538	-0.128 (-0.104-0.019)	0.173	-0.257 (-0.22 - -0.036)	0.007	0.279 (0.024-0.159)	0.009	0.137 (-0.021-0.103)	0.194	-0.16 (-0.123-0.014)	0.117

All data was represented as relative value of rCBF, rCBV, rMTT and rTTP. Beta was represented as standardized coefficients. F=frontal lobe; T=temporal lobe; O=occipital lobe; Ba=basal ganglia; Th=thalamus; Pa=parietal lobe; Ova=centrum semiovale. CBF=cerebral blood flow, CBV=cerebral blood volume, MTT= mean transit time, TTP=time to peak.