Cohort 2 – Results

Descriptive data

Gender

basic_stats_female - DataFrame

Index	AGE	CREAT	CPB_TIME	BMI	LVEF
count	167	167	167	nan	nan
mean	63.7186	0.894193	81.1018	nan	nan
std	7.83481	0.271472	59.8443	nan	nan
min	37	0.12	-9	nan	nan
25%	59	0.755	43.5	nan	nan
50%	65	0.85	86	nan	nan
75%	69	0.99	122	nan	nan
max	83	2.7	343	nan	nan
variance	61.3842	0.0736969	3581.34	nan	nan
p-value	0.000248127	5.66425e-14	4.02304e-07	0.110631	5.62575e-05

Figure 1 - Female

basic_stats_male - DataFrame

Index	AGE	CREAT	CPB_TIME	BMI	LVEF
count	1091	1085	1091	nan	nan
mean	61.561	1.08153	89.7214	nan	nan
std	7.85597	0.240667	52.0212	nan	nan
min	22	0.51	-9	nan	nan
25%	57	0.95	68	nan	nan
50%	62	1.05	96	nan	nan
75%	68	1.16	124	nan	nan
max	83	3.74	248	nan	nan
variance	61.7162	0.0579204	2706.2	nan	nan
p-value	2.31552e-12	2.1828e-36	1.73614e-20	1.76774e-11	1.2999e-14

Figure 2 – Male

Age groups

basic_stats_age1 - DataFrame

Index	AGE	CREAT	CPB_TIME	BMI	LVEF
count	435	430	435	nan	nan
mean	53.1402	1.02295	86.8092	nan	nan
std	5.32026	0.201082	55.9721	nan	nan
min	22	0.12	-9	nan	nan
25%	50	0.904375	57.5	nan	nan
50%	54	1.02	95	nan	nan
75%	57	1.12	124	nan	nan
max	59	2.18	343	nan	nan
variance	28.3052	0.040434	3132.87	nan	nan
p-value	2.19345e-17	6.09696e-15	3.70855e-13	4.24997e-05	3.12721e-10

Figure 3 - Age: <59

basic_stats_age2 - DataFrame

Index	AGE	CREAT	CPB_TIME	BMI	LVEF
count	633	632	633	nan	nan
mean	64.684	1.06032	87.4186	nan	nan
std	2.91135	0.260428	52.7161	nan	nan
min	60	0.52	-9	nan	nan
25%	62	0.9175	65	nan	nan
50%	65	1.03	95	nan	nan
75%	67	1.15	122	nan	nan
max	69	3.74	244	nan	nan
variance	8.47596	0.0678229	2778.98	nan	nan
p-value	1.96714e-16	1.17496e-28	1.55788e-15	1.12662e-06	8.7272e-10

Figure 4 - Age: 60-69

basic_stats_age3 - DataFrame

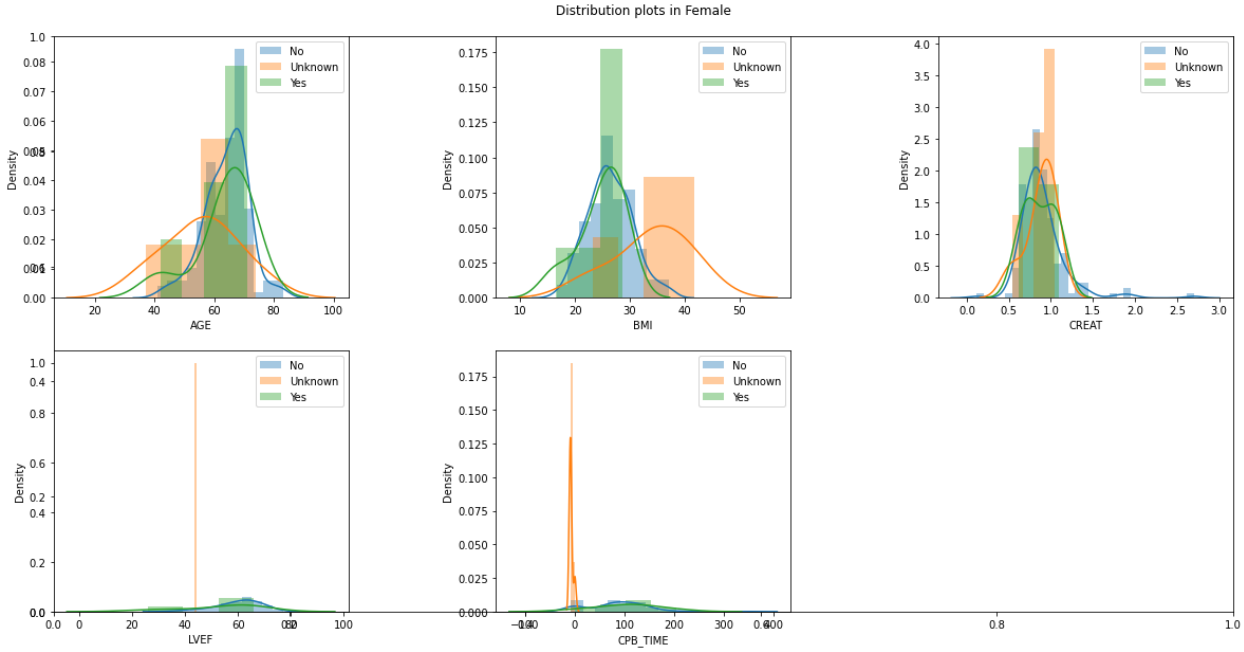
Index	AGE	CREAT	CPB_TIME	BMI	LVEF
count	190	190	190	nan	nan
mean	72.3316	1.12	96.4842	nan	nan
std	2.85089	0.314525	47.4174	nan	nan
min	70	0.58	-9	nan	nan
25%	70	0.94	75	nan	nan
50%	71.5	1.065	98.5	nan	nan
75%	73	1.2475	125	nan	nan
max	83	3.5	225	nan	nan
variance	8.12757	0.0989259	2248.41	nan	nan
p-value	2.59387e-16	4.8755e-14	1.17817e-05	0.00172571	0.00117435

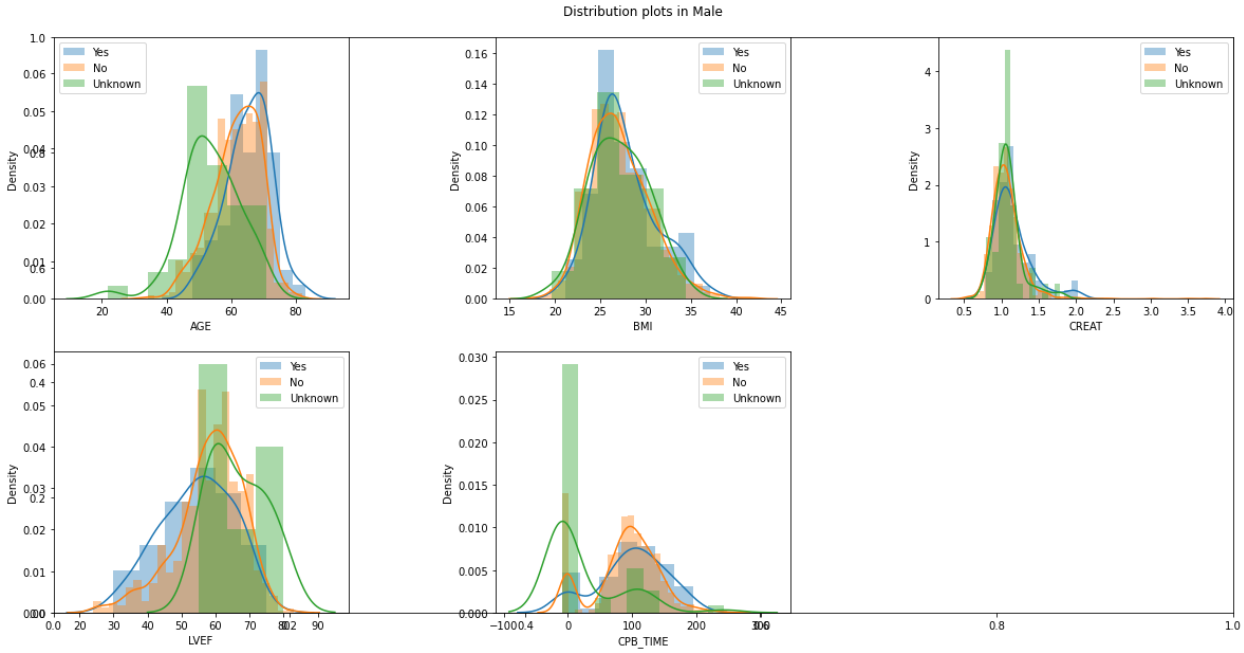
Figure 5 - Age: >70

Numerical features

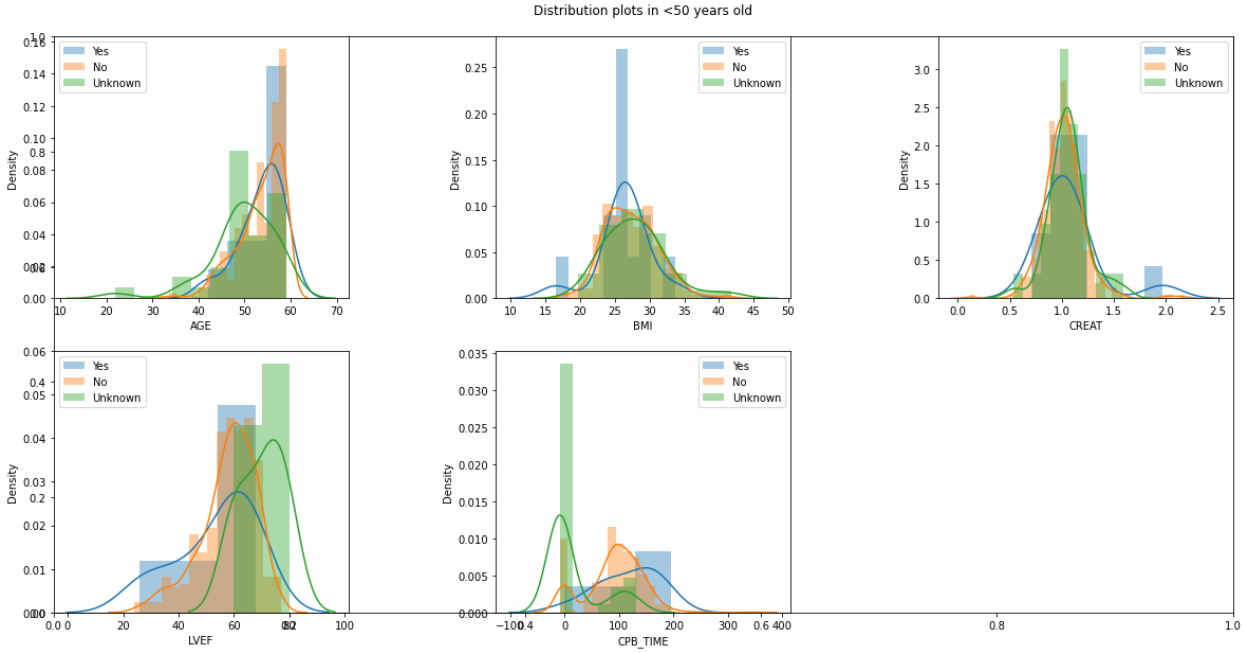
Distribution plots:

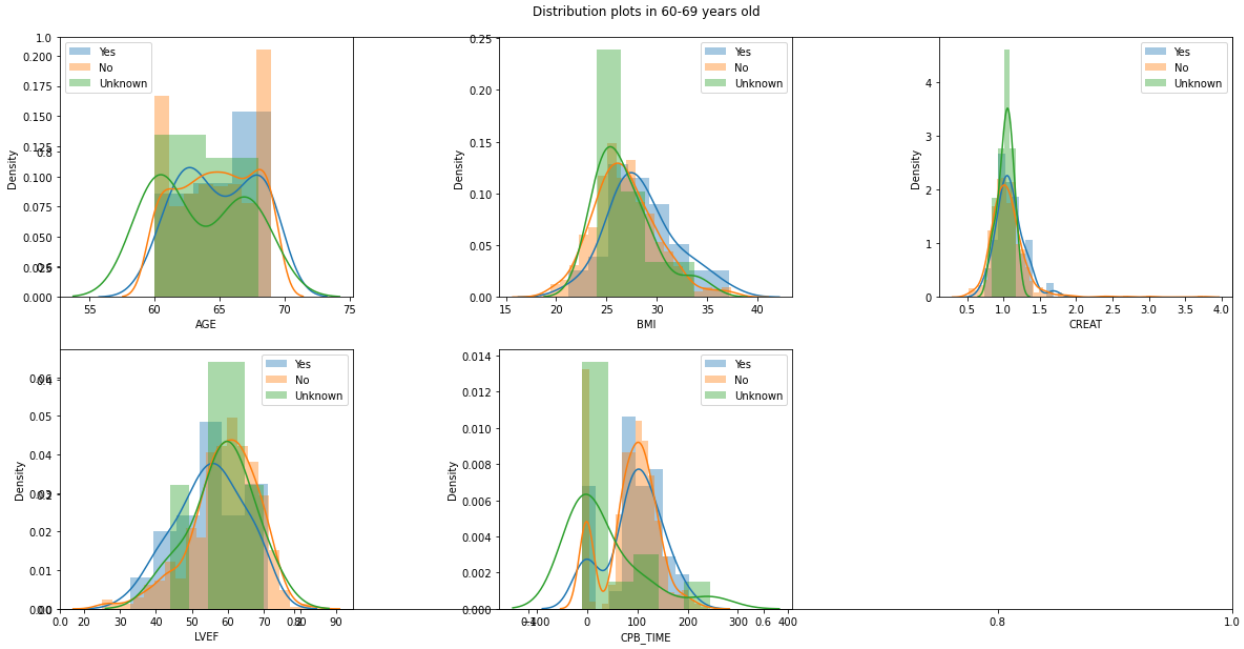
Gender

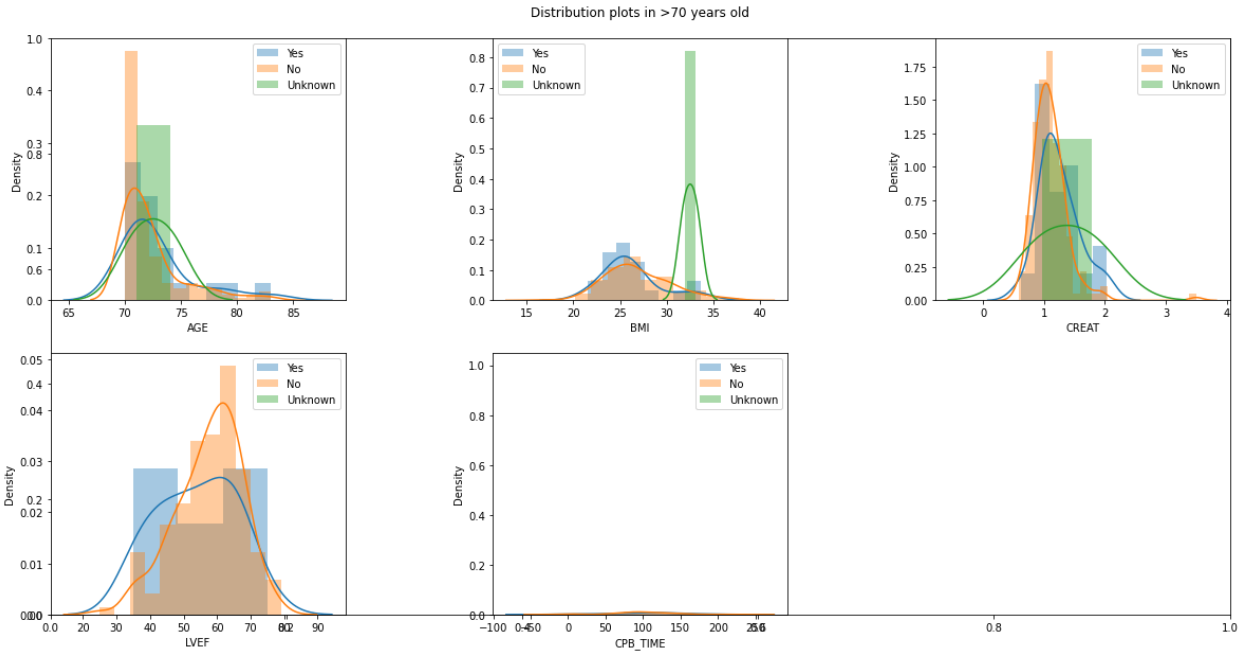




Age groups


Distribution plots in <50 years old
Yes
No
Unknown
Density
AGE
BMI
CREAT
LVEF
CPB_TIME


Distribution plots in 60-69 years old
Yes
No
Unknown
Density
AGE
BMI
CREAT
LVEF
CPB_TIME


Distribution plots in >70 years old
Yes
No
Unknown
Density
AGE
BMI
CREAT
LVEF
CPB_TIME

Box plots

Gender

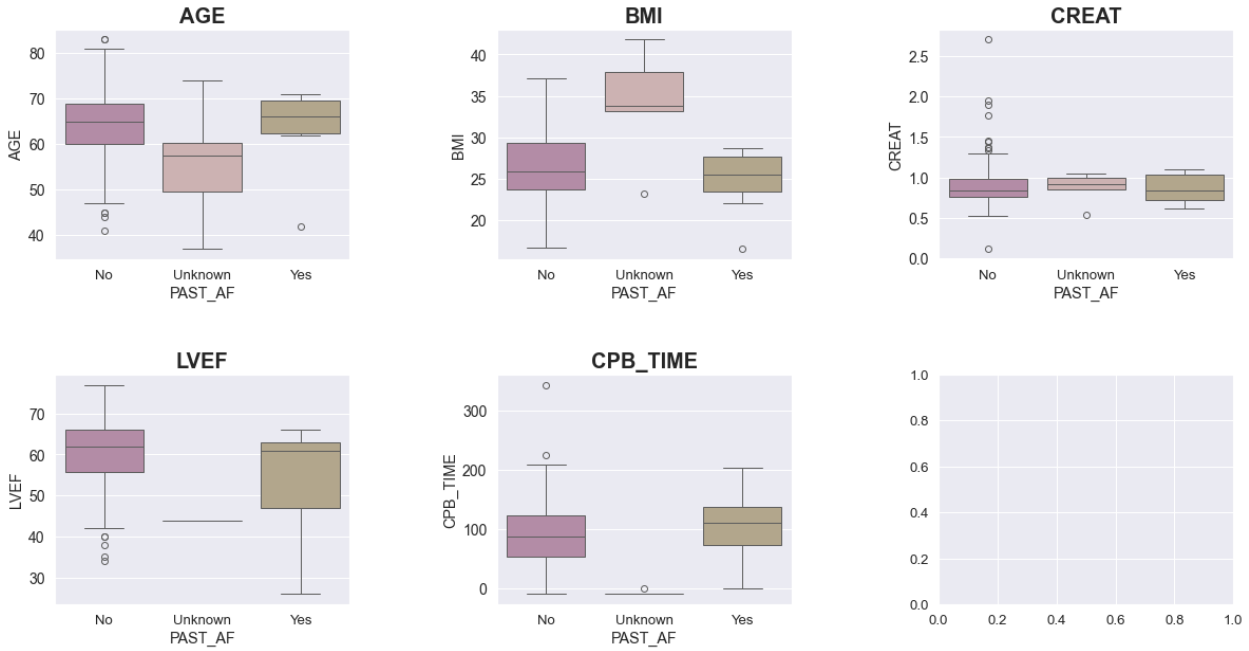


Figure 6: Female population

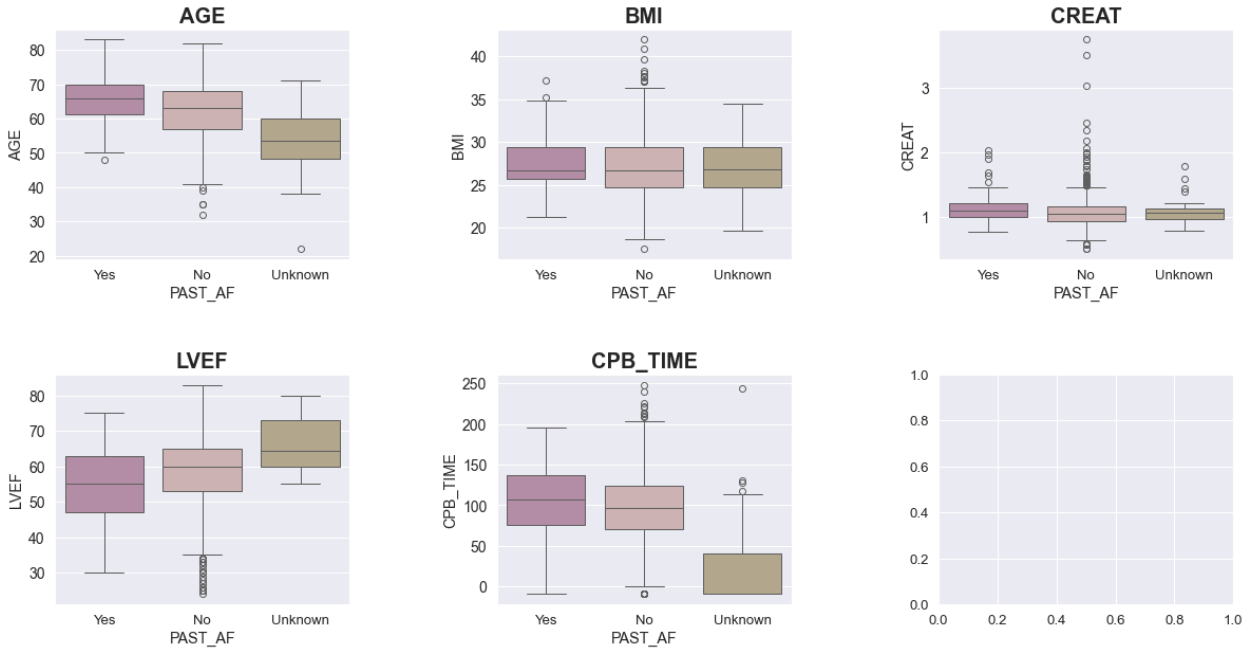


Figure 7: Male population

Age group

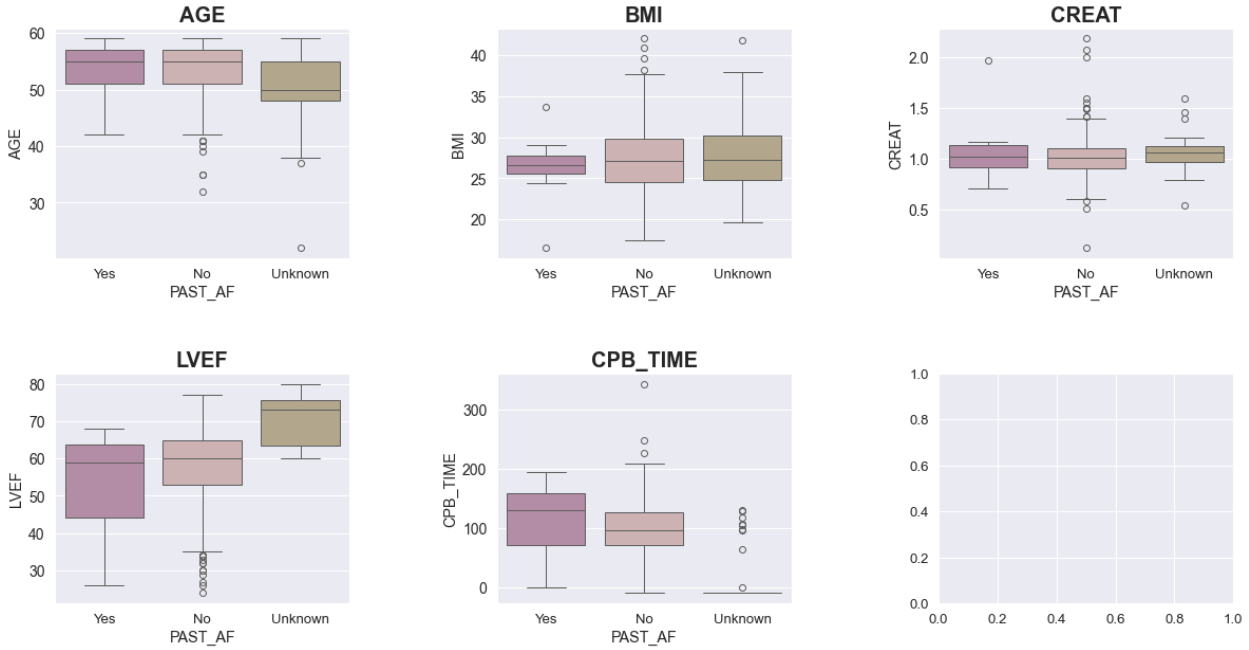


Figure 8: Age < 59

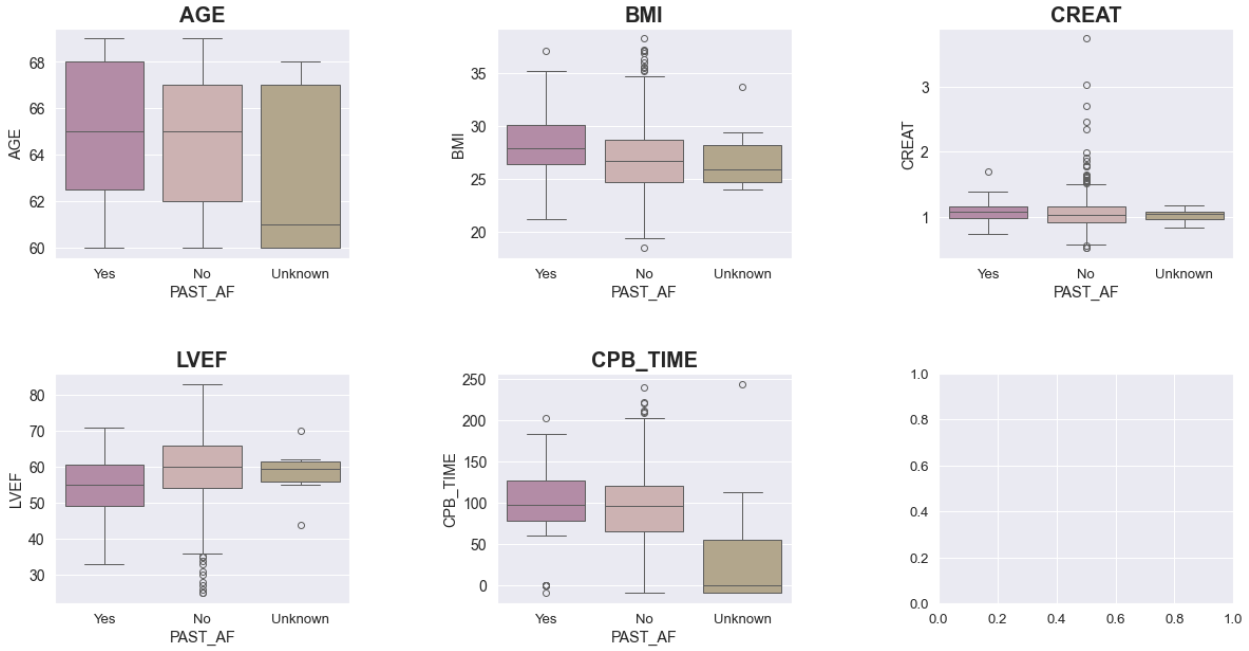


Figure 9: Age - 60-69

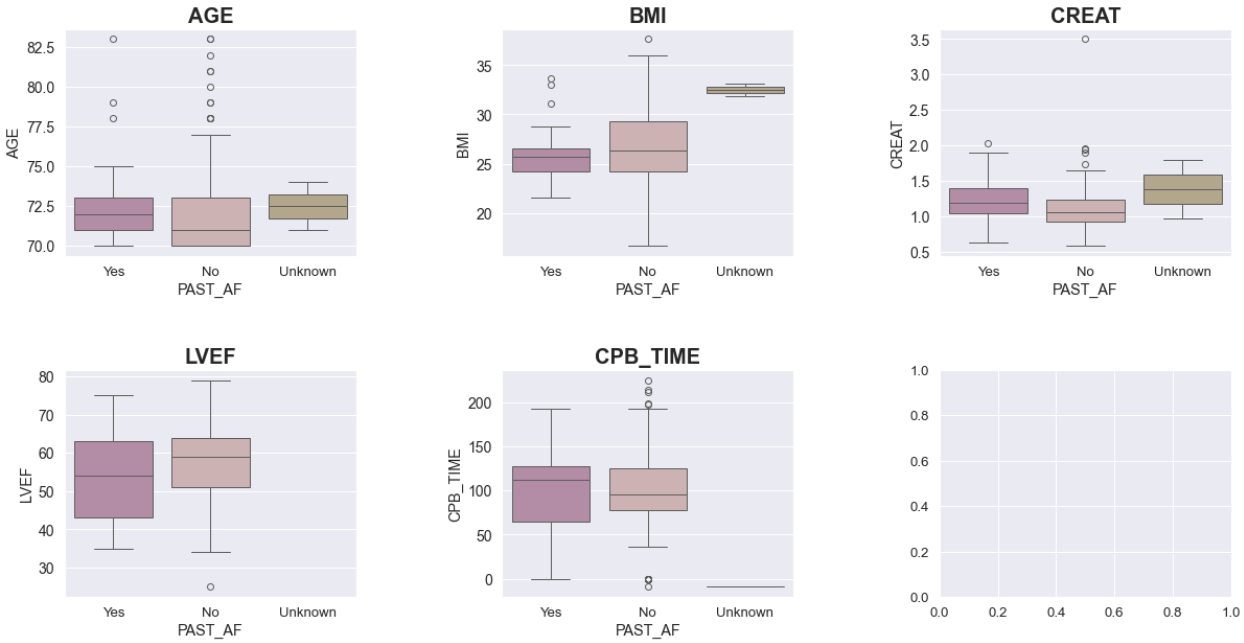


Figure 10: Age >70

Correlation

Gender

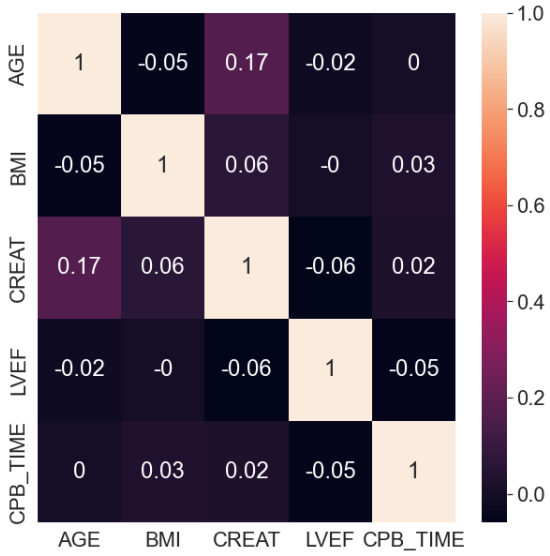


Figure 11: Male

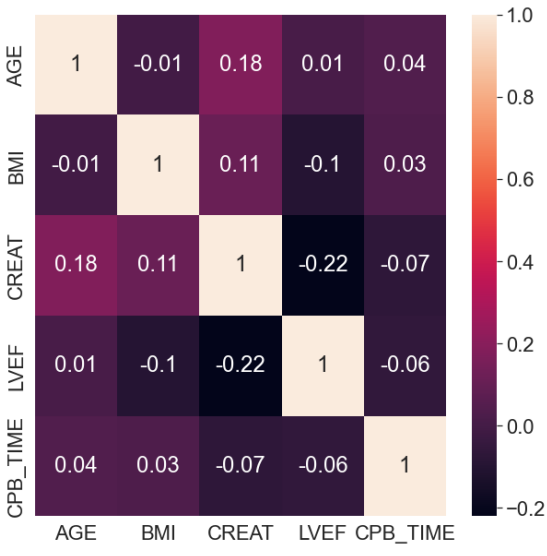


Figure 12: Female

Age group

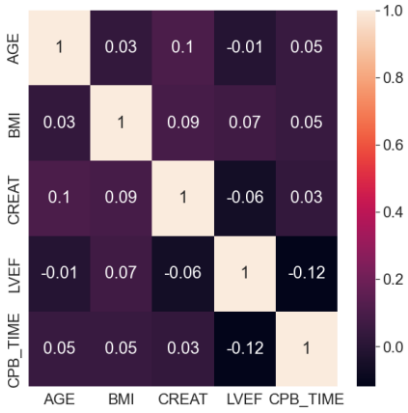


Figure 13 - Age < 59

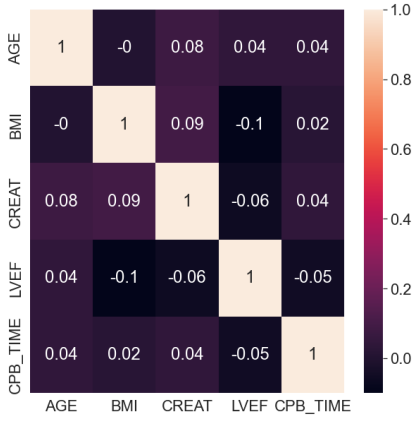


Figure 14 - Age: 60-69

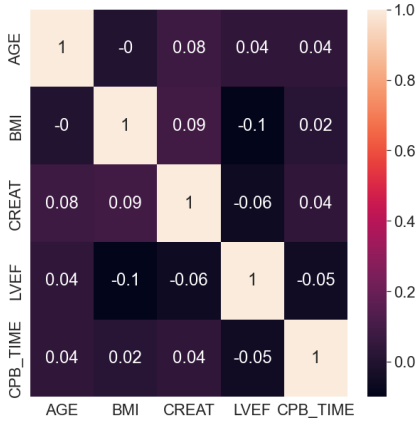


Figure 15 - Age > 70

Categorical Features:

Gender

Figure 16 – Female

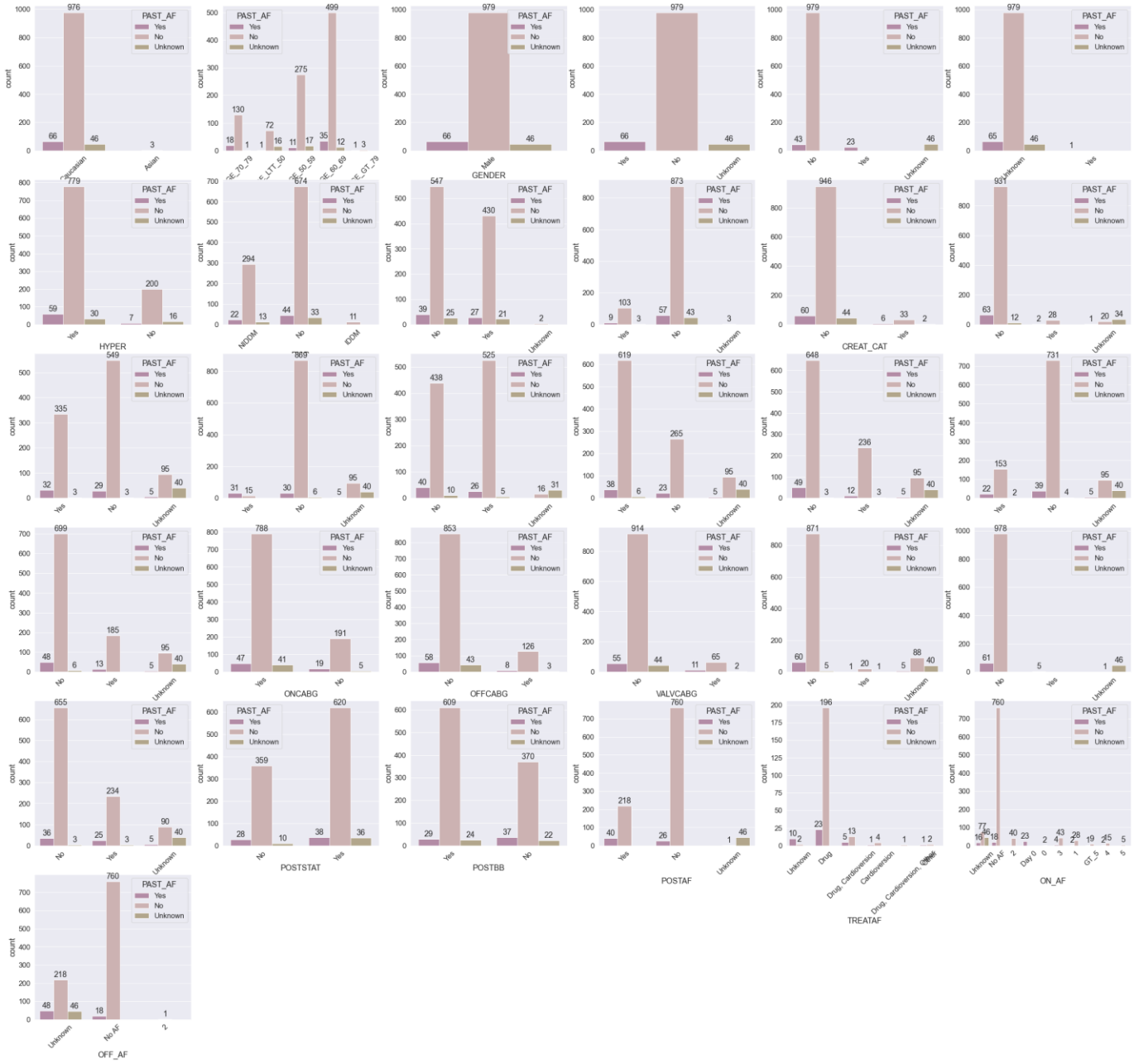


Figure 17: Male

Age groups

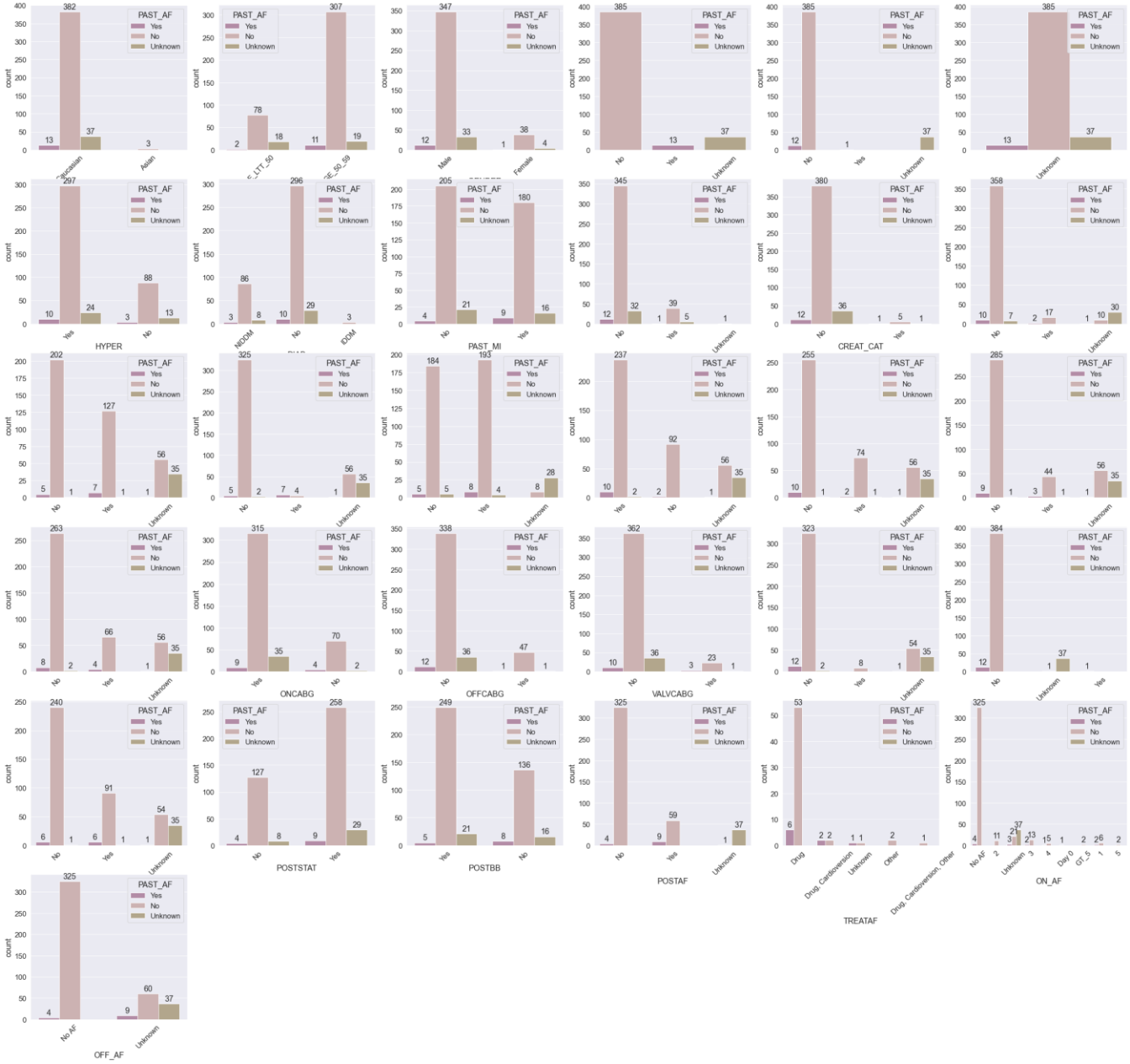


Figure 18 - Age < 60

Figure 19 - Age: 60-69

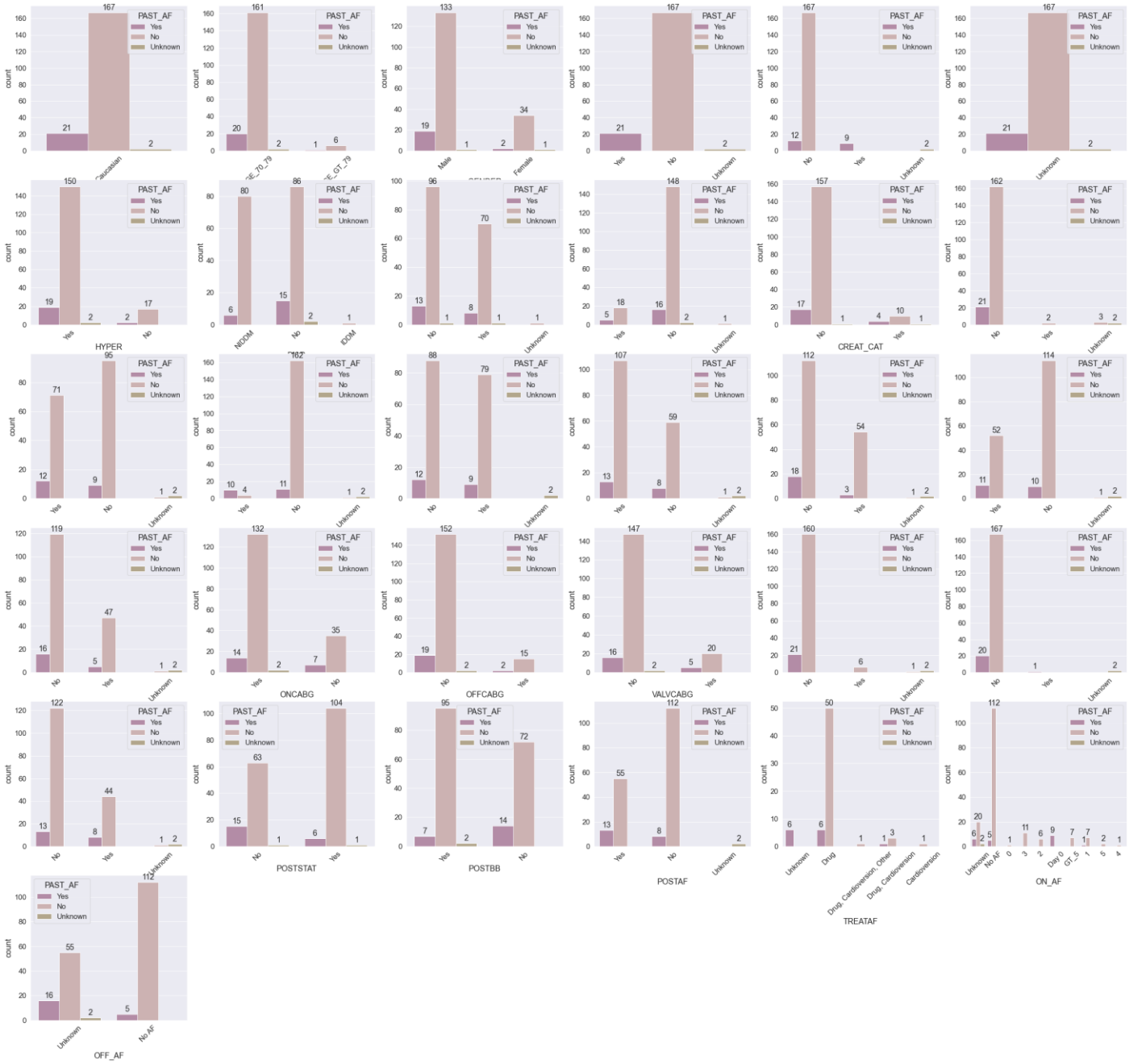


Figure 20 - Age > 70

Statistical tests (chi 2 test)

results_female - DataFrame

Index	Variable	Chi2	P-value
3	PRE_AF	5.04268	0.0247301
10	LVEF35	6.50661	0.0386463
12	PREAA	49.3204	1.95075e-11
22	INTMAZE	5.04268	0.0247301
28	ON_AF	34.0307	4.01098e-05
29	OFF_AF	5.27914	0.0215824

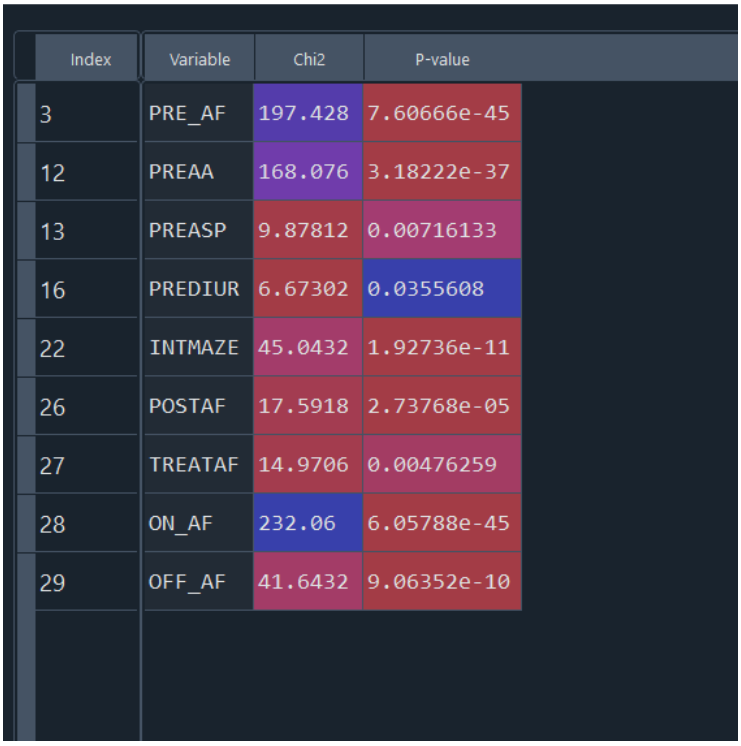
results_male - DataFrame

Index	Variable	Chi2	P-value
1	AGE_CAT	16.927	0.00199713
3	PRE_AF	332.843	2.31014e-74
9	CREAT_CAT	4.15149	0.0415979
12	PREAA	303.774	1.08722e-66
13	PREASP	6.85696	0.0324361
16	PREDIUR	13.9029	0.000957266
20	VALVCABG	7.79174	0.00524856
22	INTMAZE	74.5814	6.38038e-17
23	INTRAINO	6.47986	0.0391665
25	POSTBB	7.92558	0.00487406
26	POSTAF	48.8969	2.41085e-11
27	TREATAF	49.3851	1.85134e-09
28	ON_AF	385.502	1.69439e-77
29	OFF_AF	82.9774	9.58726e-19

results_age1 - DataFrame

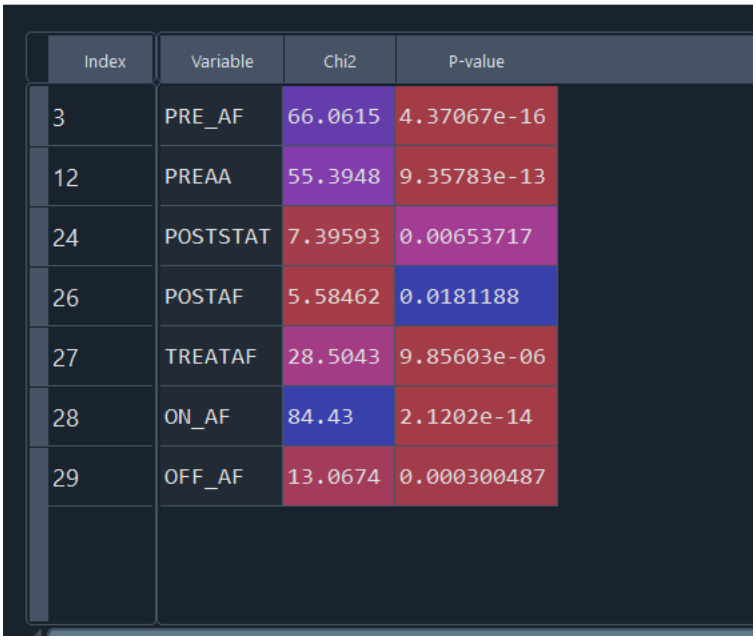
Index	Variable	Chi2	P-value
3	PRE_AF	6.9297	0.0084776
12	PREAA	130.497	4.60297e-29
22	INTMAZE	29.719	3.52052e-07
26	POSTAF	25.7999	2.49814e-06
28	ON_AF	61.157	2.76237e-10
29	OFF_AF	21.6489	3.27394e-06

results_age2 - DataFrame



Index	Variable	Chi2	P-value
3	PRE_AF	197.428	7.60666e-45
12	PREAA	168.076	3.18222e-37
13	PREASP	9.87812	0.00716133
16	PREDIUR	6.67302	0.0355608
22	INTMAZE	45.0432	1.92736e-11
26	POSTAF	17.5918	2.73768e-05
27	TREATAF	14.9706	0.00476259
28	ON_AF	232.06	6.05788e-45
29	OFF_AF	41.6432	9.06352e-10

results_age3 - DataFrame

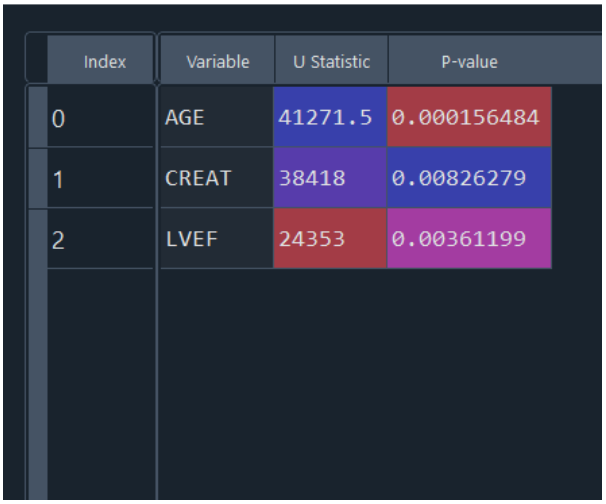


Index	Variable	Chi2	P-value
3	PRE_AF	66.0615	4.37067e-16
12	PREAA	55.3948	9.35783e-13
24	POSTSTAT	7.39593	0.00653717
26	POSTAF	5.58462	0.0181188
27	TREATAF	28.5043	9.85603e-06
28	ON_AF	84.43	2.1202e-14
29	OFF_AF	13.0674	0.000300487

Statistical tests (mann whitney u test)

Female: None

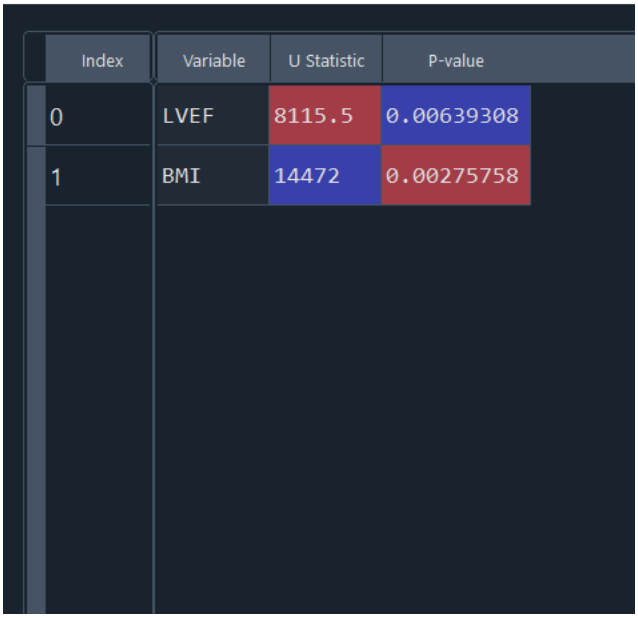
results_nummale - DataFrame



Index	Variable	U Statistic	P-value
0	AGE	41271.5	0.000156484
1	CREAT	38418	0.00826279
2	LVEF	24353	0.00361199

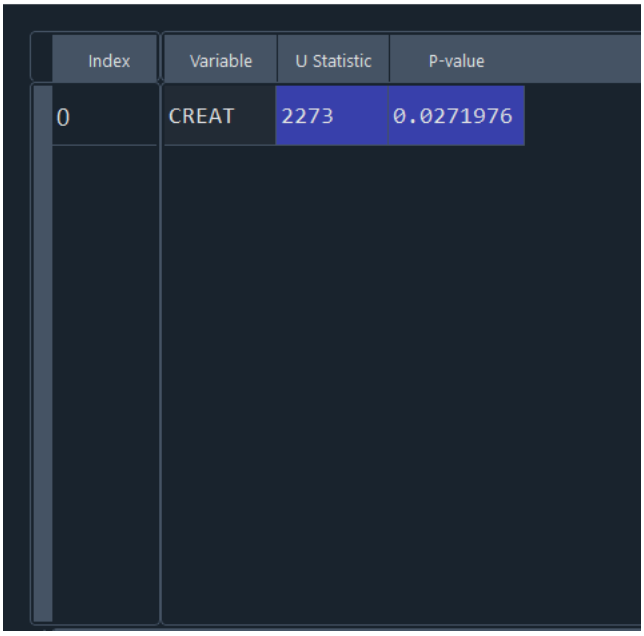
Age 1: none

results_age2 - DataFrame



Index	Variable	U Statistic	P-value
0	LVEF	8115.5	0.00639308
1	BMI	14472	0.00275758

results_age3 - DataFrame



Index	Variable	U Statistic	P-value
0	CREAT	2273	0.0271976