

Cohort 1 – Results

Descriptive data

Gender

basic_stats_male - DataFrame

	Index	Age at CABG (years)	from CABG to recur	Euroscore II	BMI	creatinine (mg/dl)	action at adr
count		1116	277	1116	1116	1116	1102
mean		62.4742	2150.52	1.37414	27.1883	1.06489	57.2477
std		6.97545	1252.22	1.91121	3.60946	0.309131	10.5663
min		38.653	388	0.5	16.263	0.5	17
25%		57.9877	1101	0.83527	24.61	0.92	52
50%		63.269	1941	1.02695	26.7018	1.03	59
75%		68.0876	3072	1.34892	29.39	1.15	65
max		73.8809	5771	46.3	41.9143	8.15	83
variance		48.6568	1.56805e+06	3.65271	13.0282	0.0955619	111.647
p-value		3.93849e-16	1	0	6.63651e-12	0	1

Figure 1: Female

basic_stats_female - DataFrame

	Index	Age at CABG (year)	from CABG to recur	Euroscore II	BMI	Creatinine (mg/dl)	action at adr
count		132	39	132	132	132	129
mean		64.5714	2024.13	1.70943	25.9935	0.901515	58.4109
std		6.41637	1098.67	0.990016	4.16626	0.240561	10.0356
min		44.3641	366	0.750745	17.73	0.12	20
25%		60	1216.5	1.16969	22.9606	0.76	52
50%		66.2697	1819	1.39506	25.43	0.85	60
75%		69.6523	2652.5	1.86762	28.7363	1.005	66
max		73.9411	4563	6.0479	37.11	1.9	78
variance		41.1698	1.20708e+06	0.980131	17.3577	0.0578694	100.713
p-value		3.222e-05	1	4.1436e-14	0.0480638	1.25716e-07	1

Figure 2: Male

Age groups

basic_stats_age1 - DataFrame

	Index	Age at CABG (years)	Days from CABG to recurrence	Euroscore II	BMI	Creatinine (mg/dl)	Ejection fraction at admission %
count		60	23	60	60	60	58
mean		46.2548	2474.7	1.094	27.8297	1.05167	57.3276
std		2.26008	1468.86	1.17995	4.90546	0.199984	11.6052
min		39.8631	602	0.5	17.51	0.54	25
25%		44.7899	1246	0.788961	24.481	0.9375	51.75
50%		46.3805	1955	0.801699	27.085	1.04	60
75%		48.1438	3576.5	0.978109	30.8925	1.12	64.75
max		49.2485	5354	9.49	41.04	1.7	76
variance		5.10797	2.15756e+06	1.39229	24.0635	0.0399938	134.68
p-value		0.00343156	1	5.7116e-15	0.0633846	0.00485507	1

Figure 3: Age - 40-49

basic_stats_age2 - DataFrame

	Index	Age at CABG (years)	from CABG to recur	Euroscore II	BMI	Creatinine (mg/dl)	action at adr
count		327	103	327	327	327	326
mean		55.777	2203.42	1.0556	27.4607	1.04251	56.6687
std		2.61752	1183.52	0.874244	3.86883	0.446236	11.4374
min		49.5058	388	0.5	16.609	0.12	20
25%		53.6715	1151.5	0.80085	24.65	0.9	51
50%		56.2355	2110	0.925103	27.18	1	58
75%		57.9952	3014	1.14531	29.7529	1.125	65
max		59.4962	5181	13.2	41.9143	8.15	80
variance		6.8514	1.40073e+06	0.764303	14.9679	0.199127	130.813
p-value		2.48609e-09	1	1.04614e-31	0.000527348	1.27322e-32	1

Figure 4: Age - 50-59

basic_stats_age3 - DataFrame

	Index	Age at CABG (years)	from CABG to recur	Euroscore II	BMI	Creatinine (mg/dl)	action at adr
count		639	144	639	639	639	627
mean		64.786	2144.96	1.46359	26.7878	1.0436	57.7592
std		2.83541	1260.97	1.59714	3.4122	0.221573	10.1054
min		59.5346	416	0.5	17.73	0.5	17
25%		62.3969	1108.5	0.925103	24.49	0.9	52
50%		65.0212	1847.5	1.09404	26.45	1.03	59
75%		67.2074	3128	1.5	29.0359	1.14	65
max		69.4757	5771	29.44	40.8983	2.35	83
variance		8.03953	1.59004e+06	2.55087	11.6431	0.0490945	102.119
p-value		4.85287e-13	1	9.64093e-43	5.70878e-05	2.52244e-17	1

Figure 5: Age- 60-69

basic_stats_age4 - DataFrame

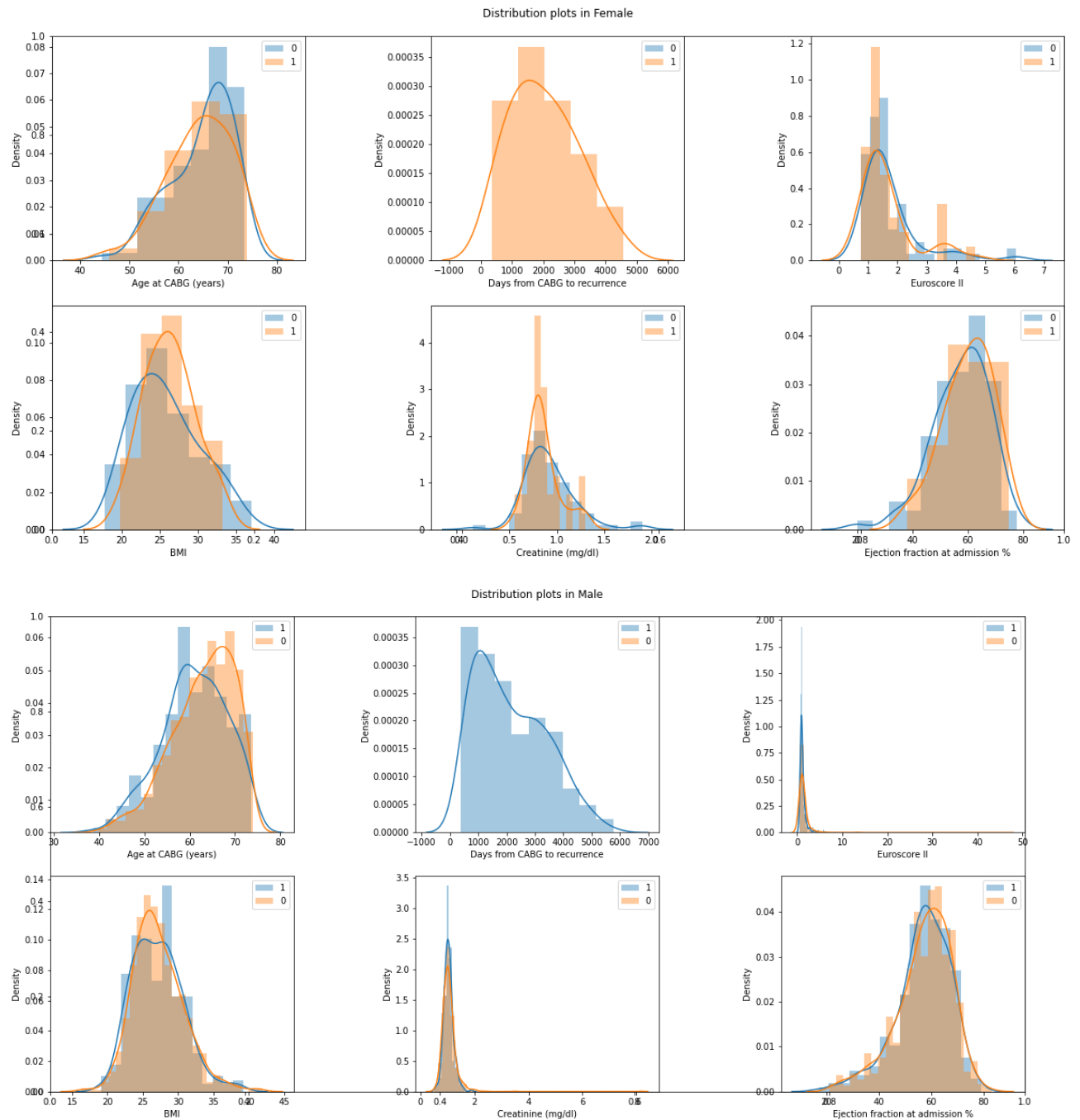
	Index	Age at CABG (years)	from CABG to recur	Euroscore II	BMI	Creatinine (mg/dl)	action at adr
count		221	45	221	221	221	219
mean		71.4634	1734.09	1.86361	27.0924	1.06579	57.3288
std		1.1097	1045.94	3.13433	3.71798	0.290706	9.94903
min		69.5168	366	0.7	16.263	0.56	26
25%		70.4942	928	1.11502	24.39	0.89	52
50%		71.488	1469	1.3451	26.49	1.02	58
75%		72.345	2455	1.75	29.38	1.2	64
max		73.9411	5173	46.3	38.89	3.5	82
variance		1.23144	1.094e+06	9.82402	13.8233	0.0845099	98.9832
p-value		0.00021831	1	6.44562e-30	0.00310325	3.23467e-15	1

Figure 6: Age - 70-79

Numerical features

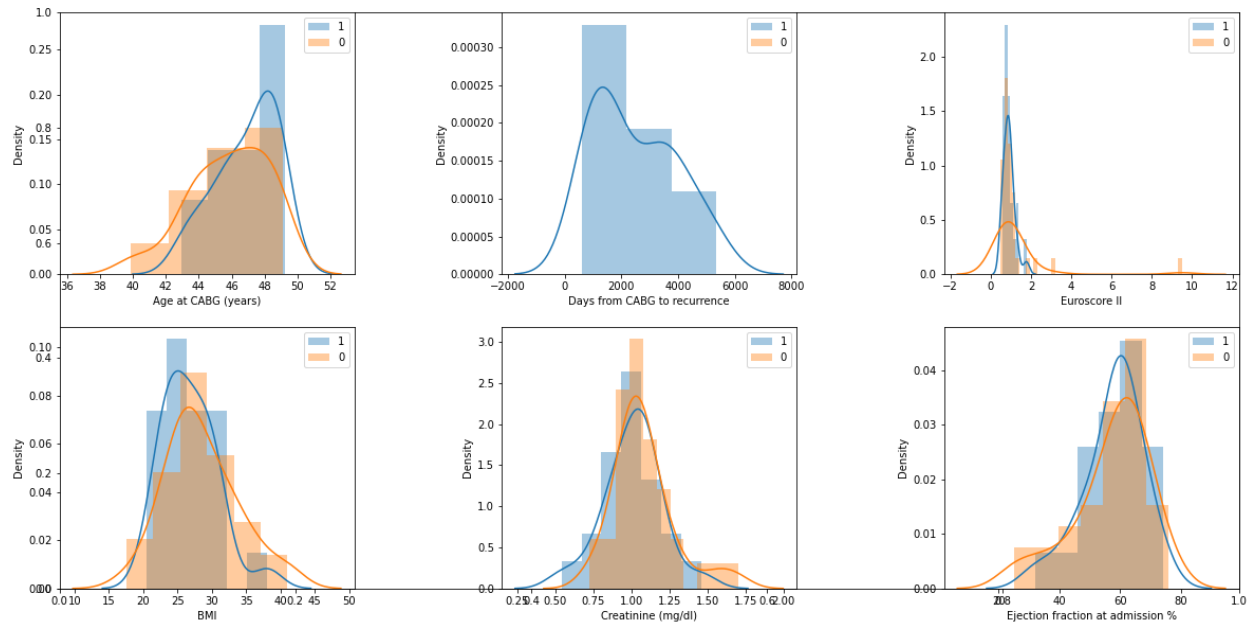
Distribution plots:

Gender

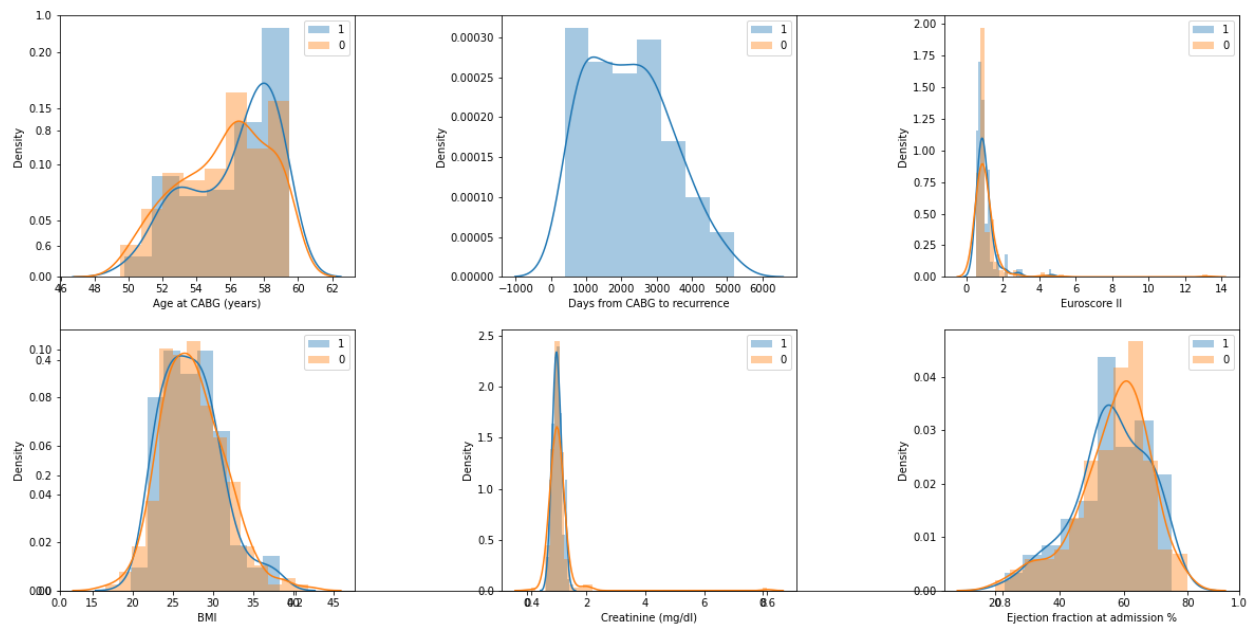


Age groups

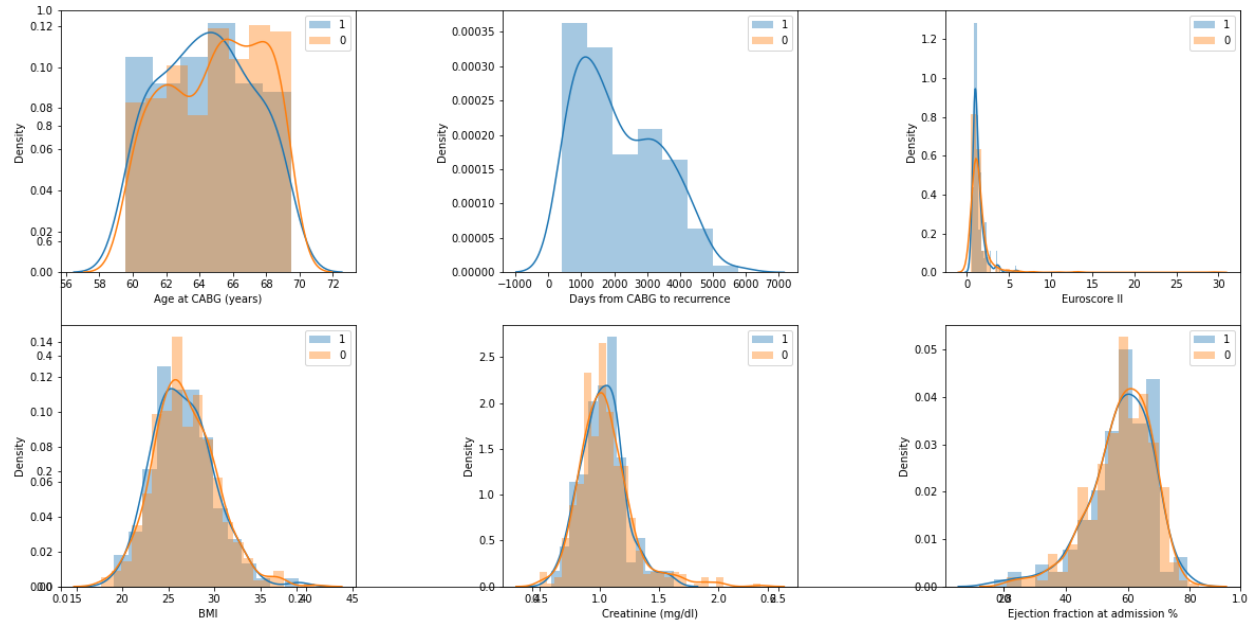
Distribution plots in Age: 40-49



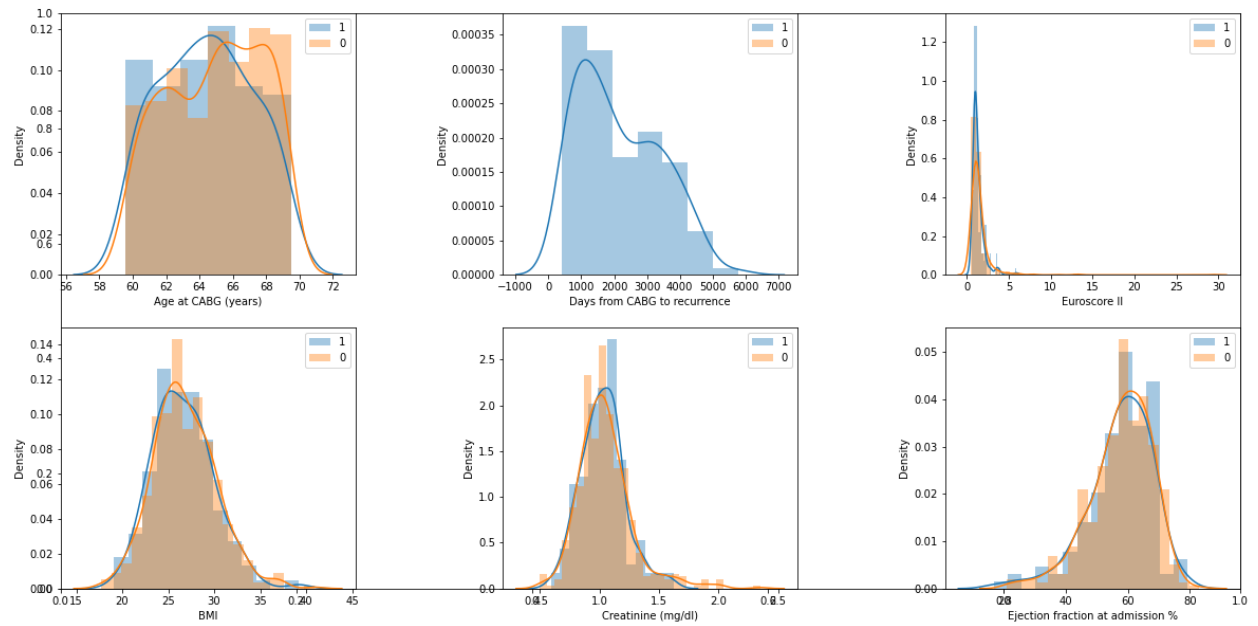
Distribution plots in Age: 50-59



Distribution plots in Age: 60-69



Distribution plots in Age: 70-79



Box plots

Gender

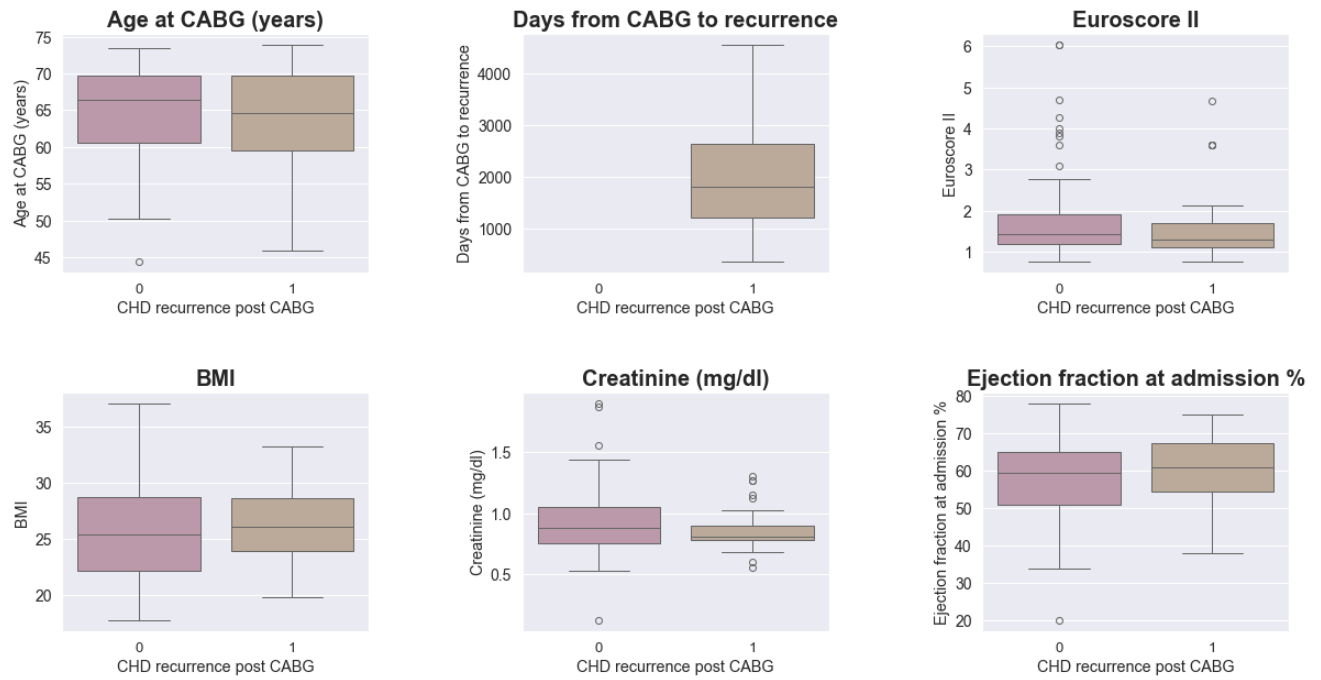


Figure 7: Female population

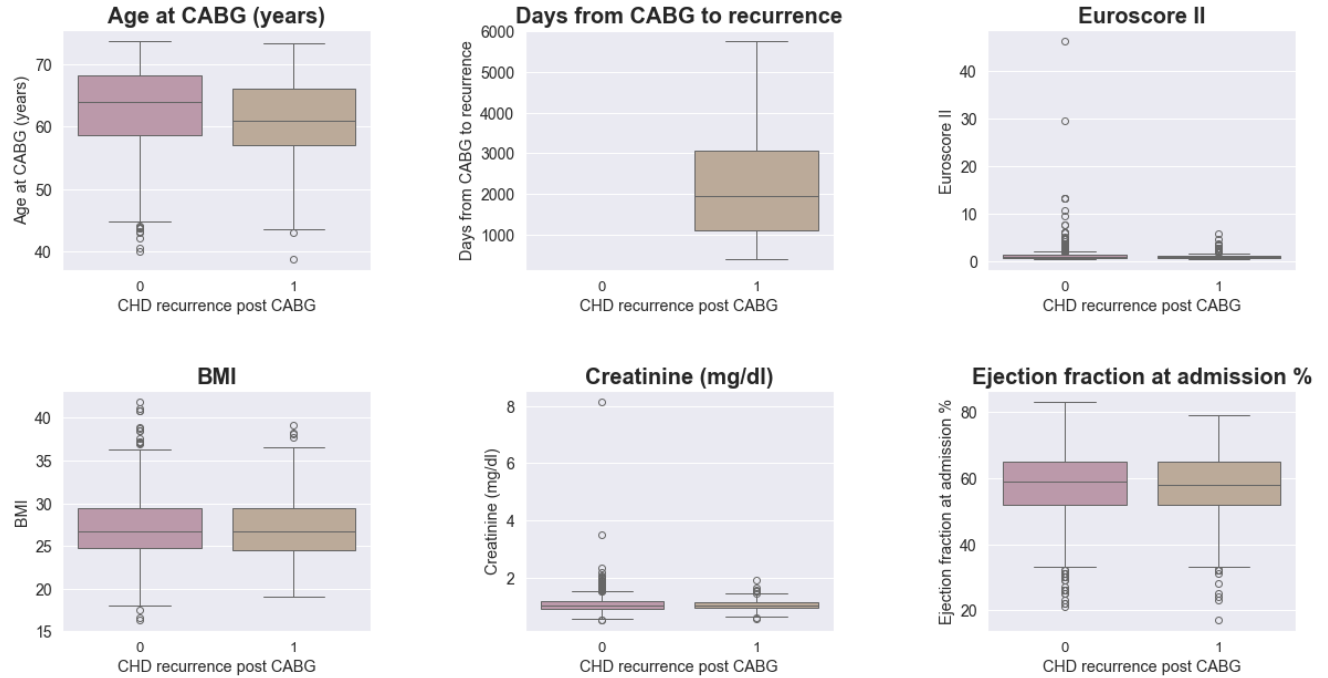


Figure 8: Male population

Age group

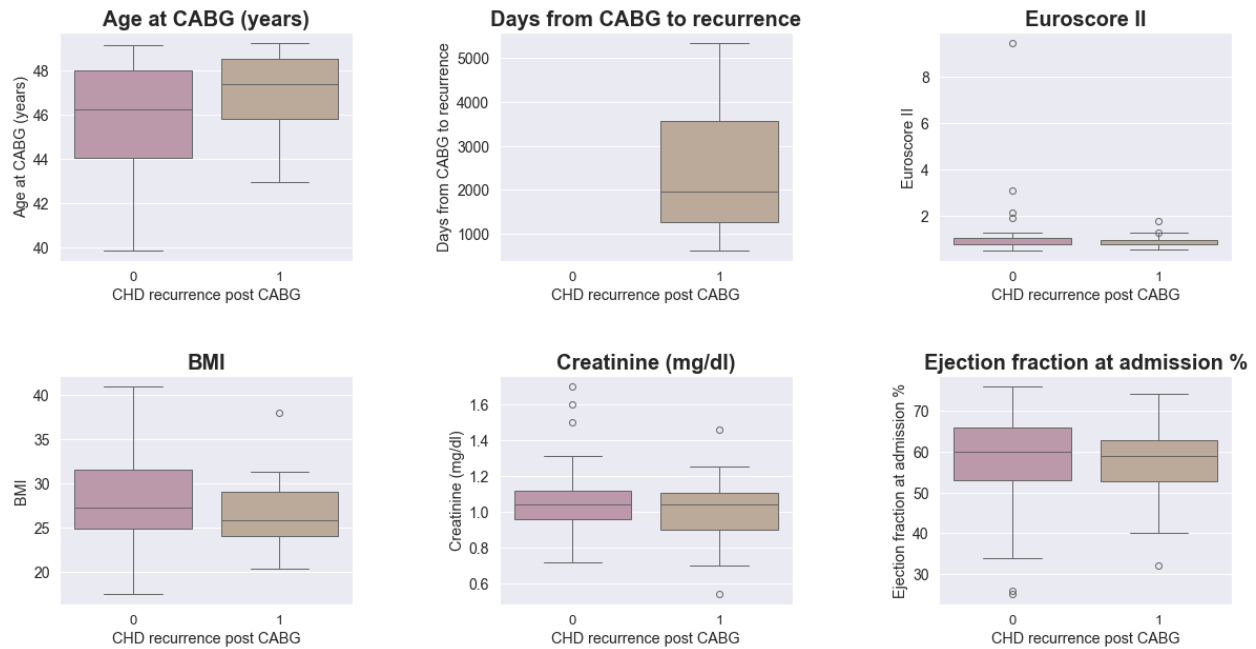


Figure 9: Age - 40-49

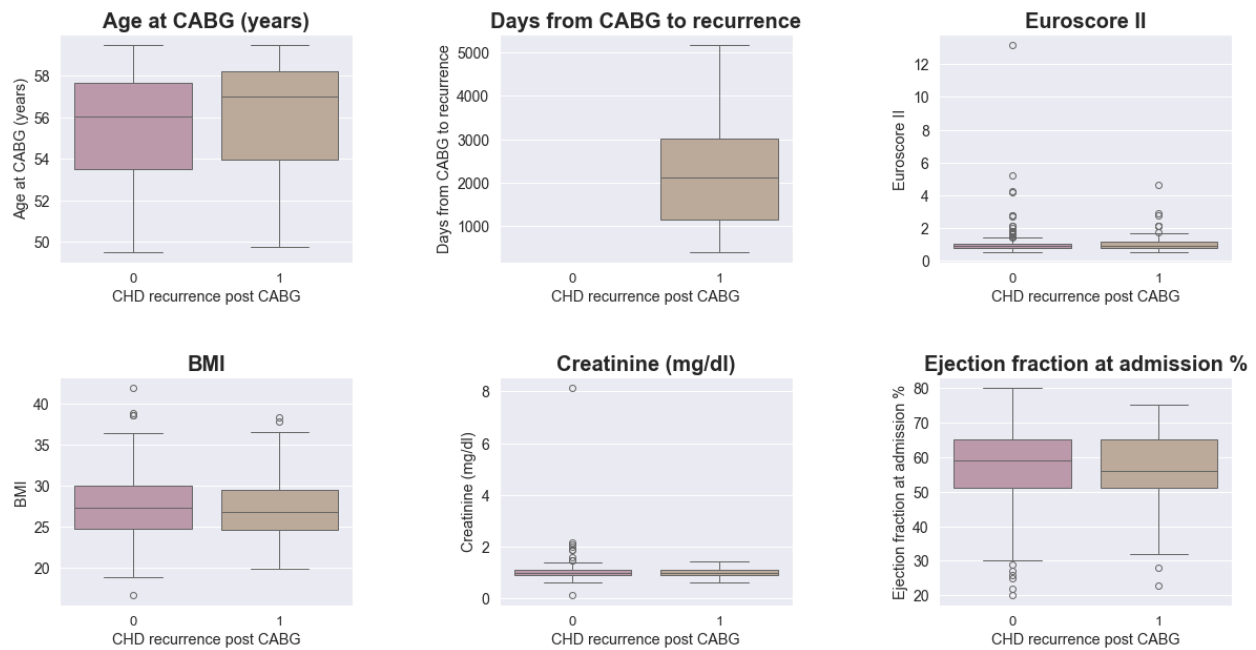


Figure 10: Age - 50-59

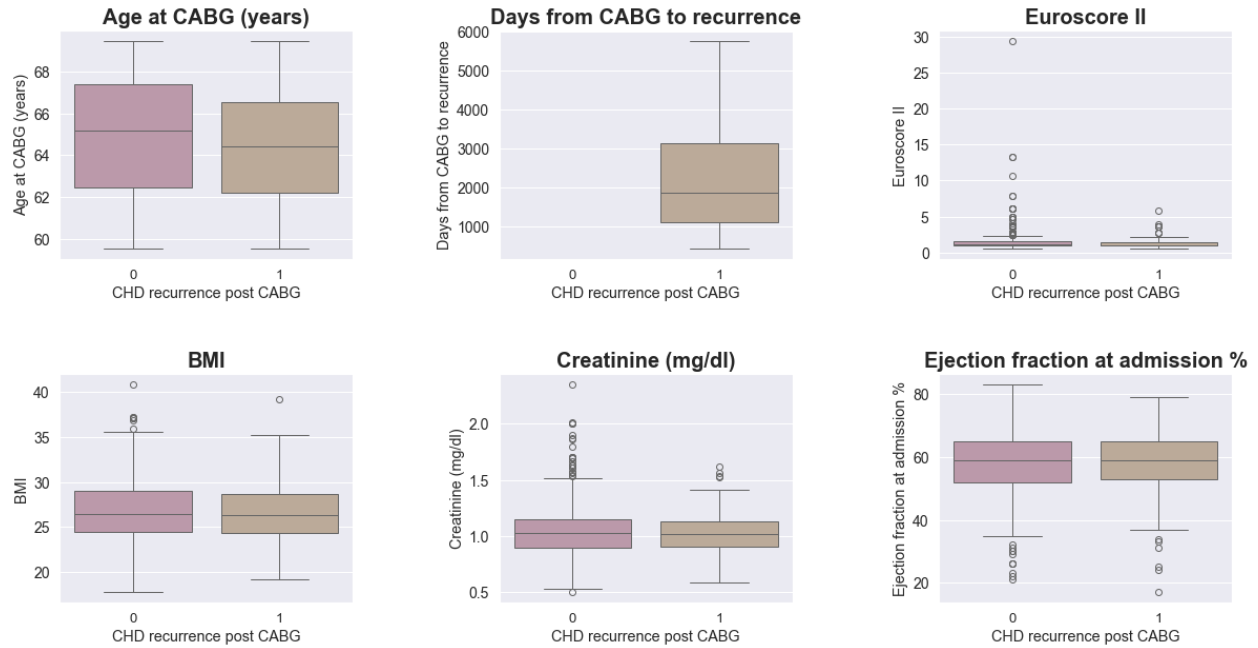


Figure 11: Age - 60-69

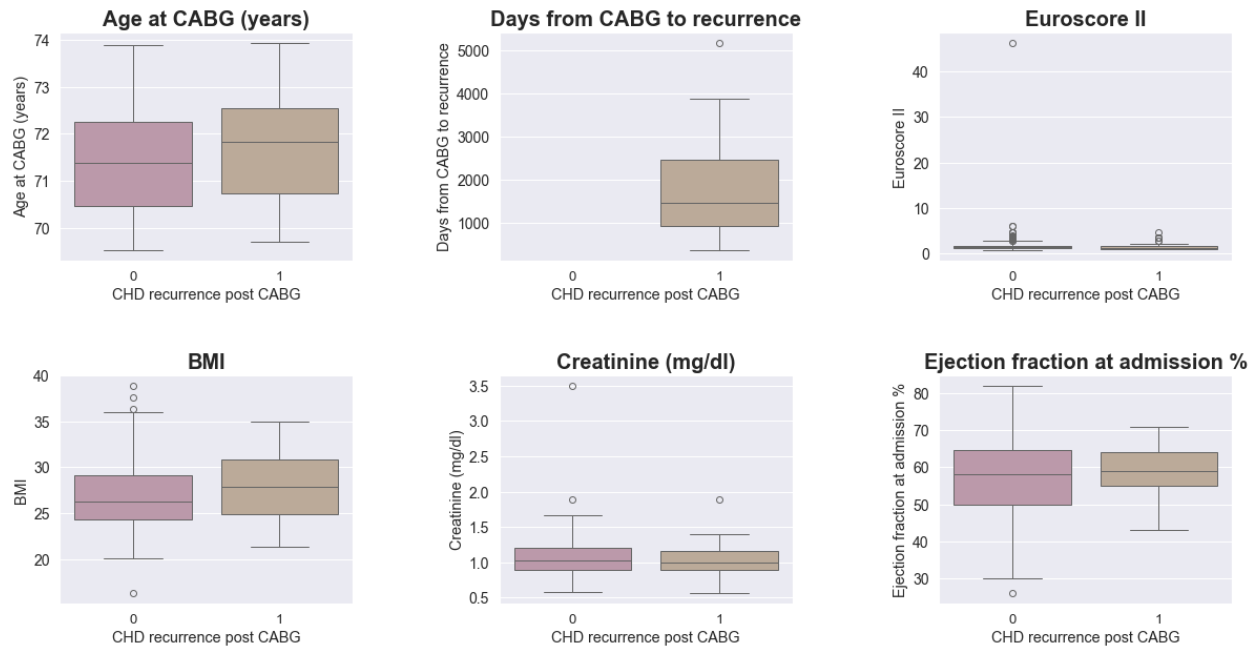


Figure 12: Age - 70-79

Correlation

Gender

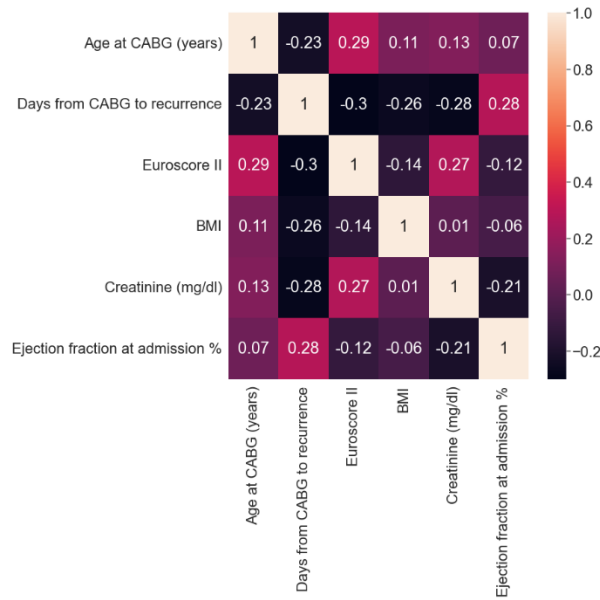


Figure 13: Female population

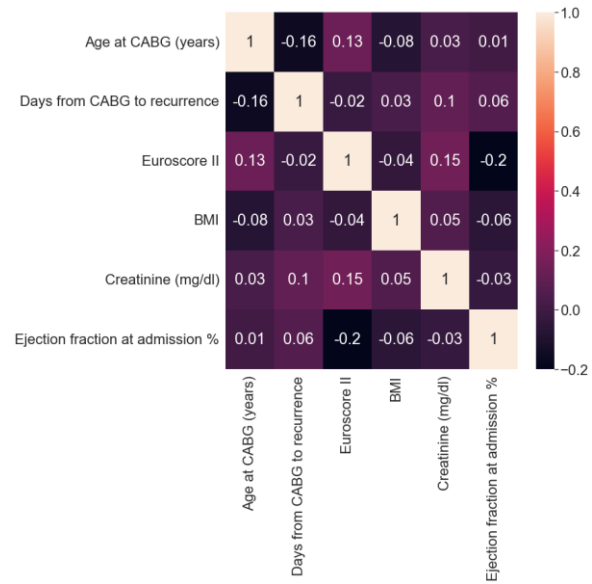


Figure 14: Male population

Age group

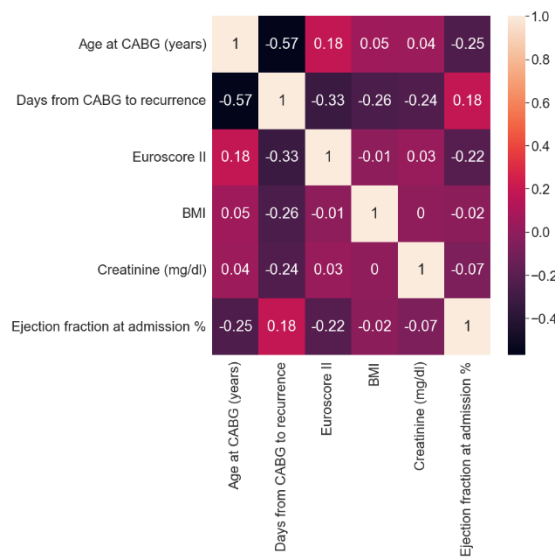


Figure 15: Age - 40-49

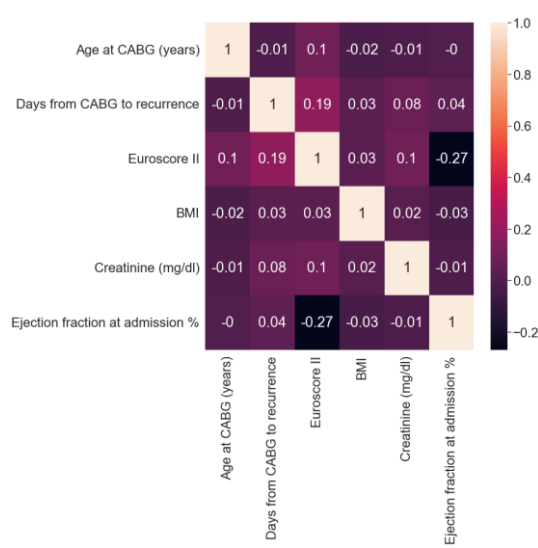


Figure 16: Age - 50-59

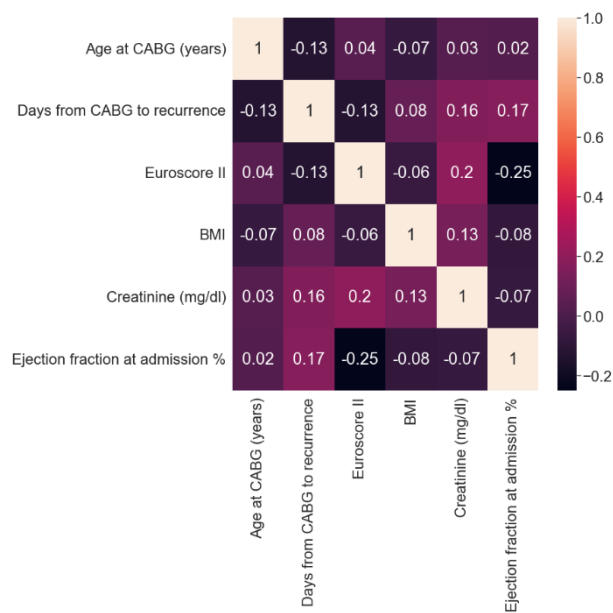


Figure 17: Age - 60-69

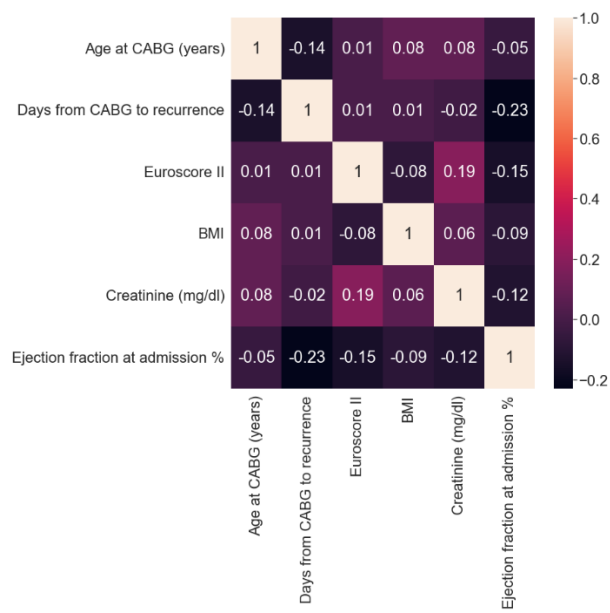


Figure 18: Age - 70-79

Categorical Features:

Gender

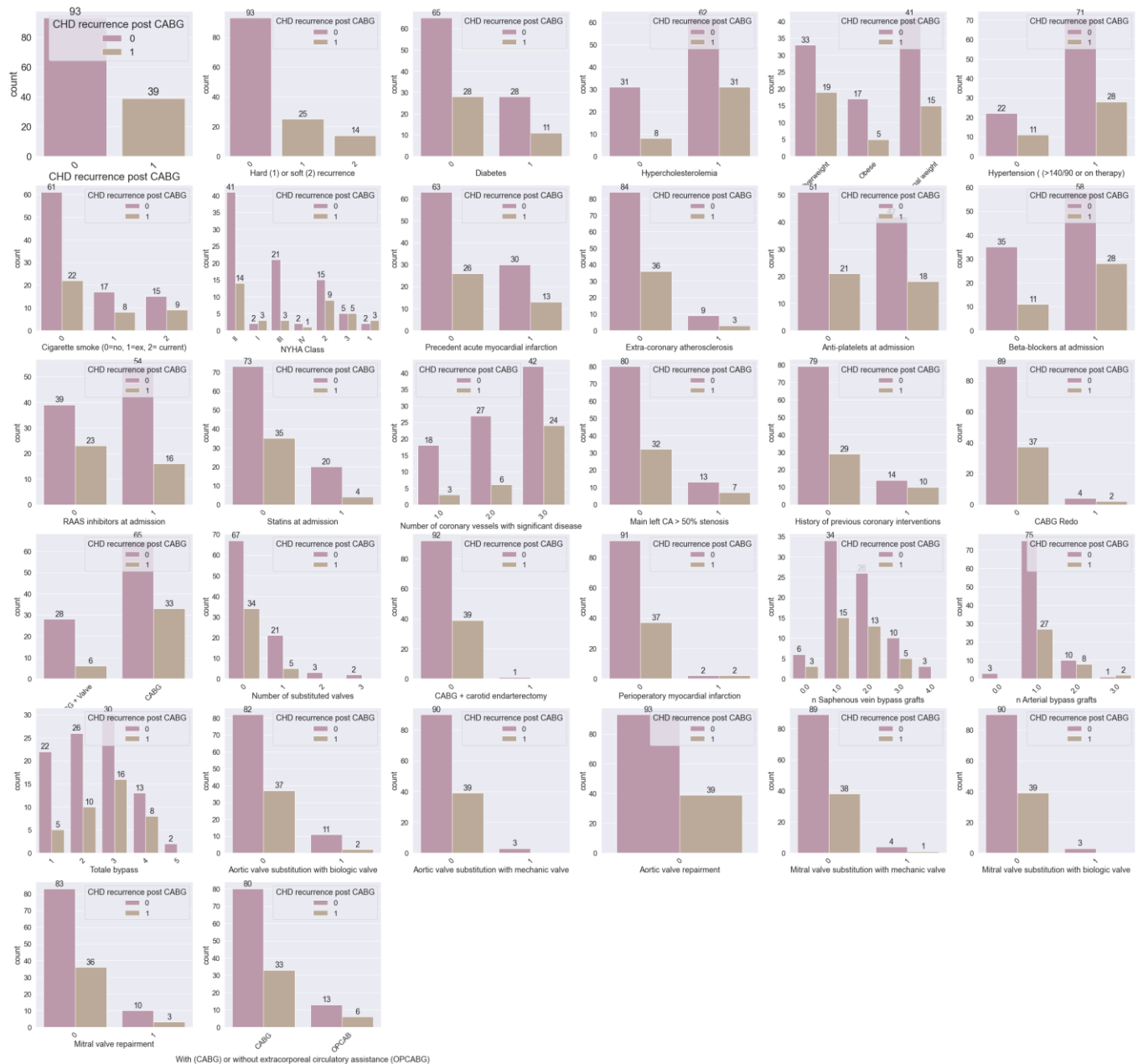
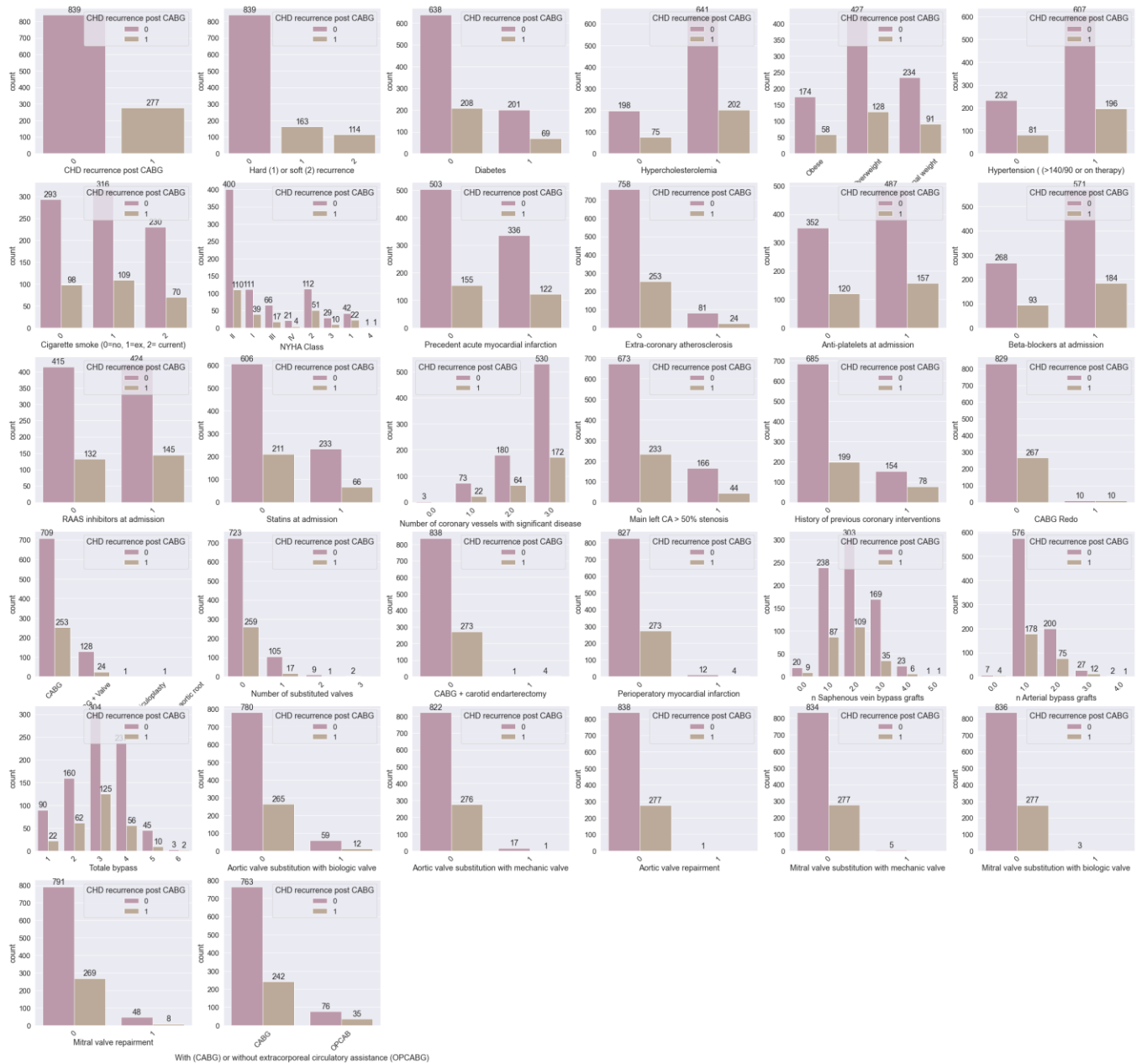


Figure 19: Female population



With (CABG) or without extracorporeal circulatory assistance (OPCAB)

Figure 20: Male population

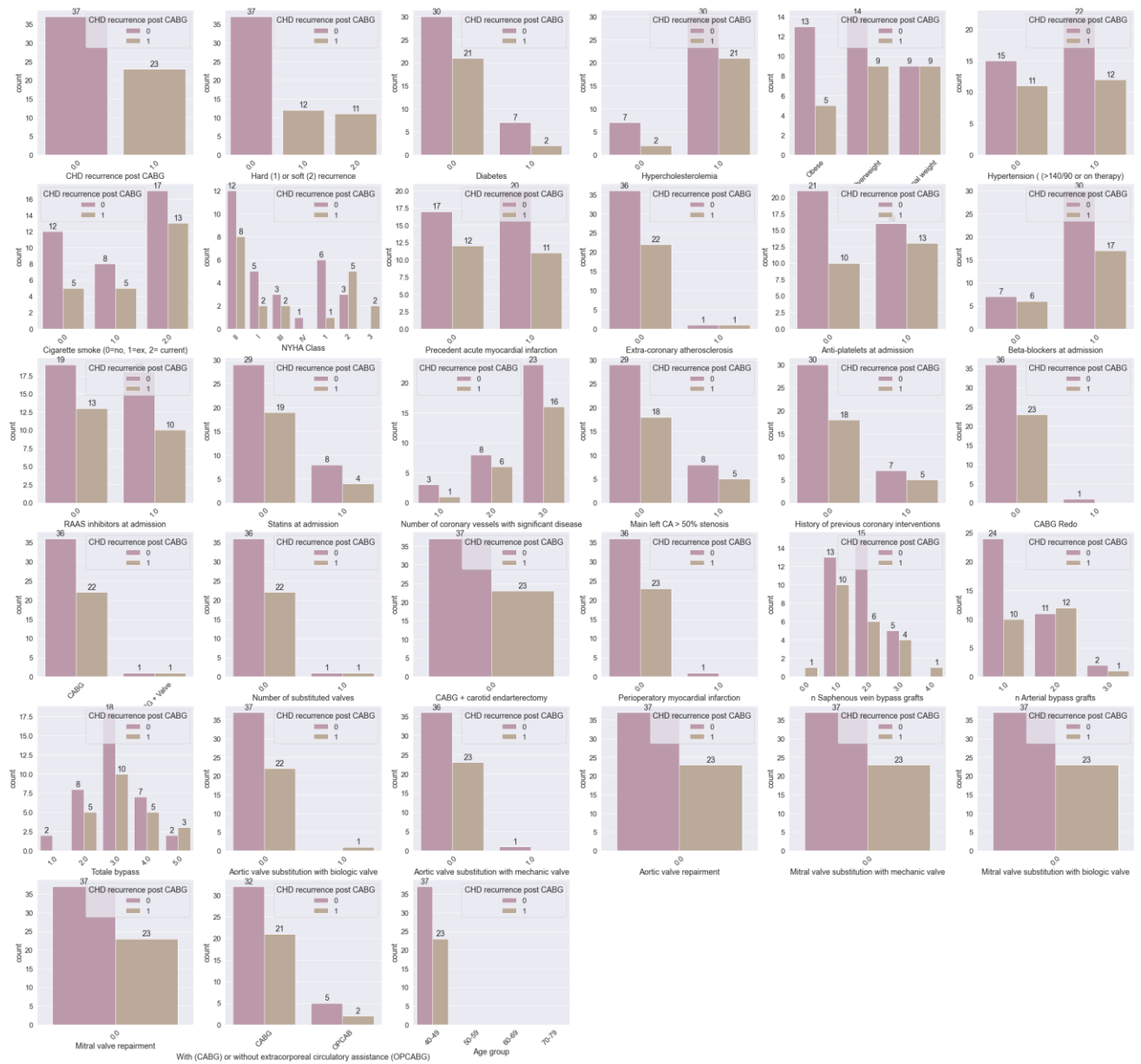


Figure 21: Age - 40-49

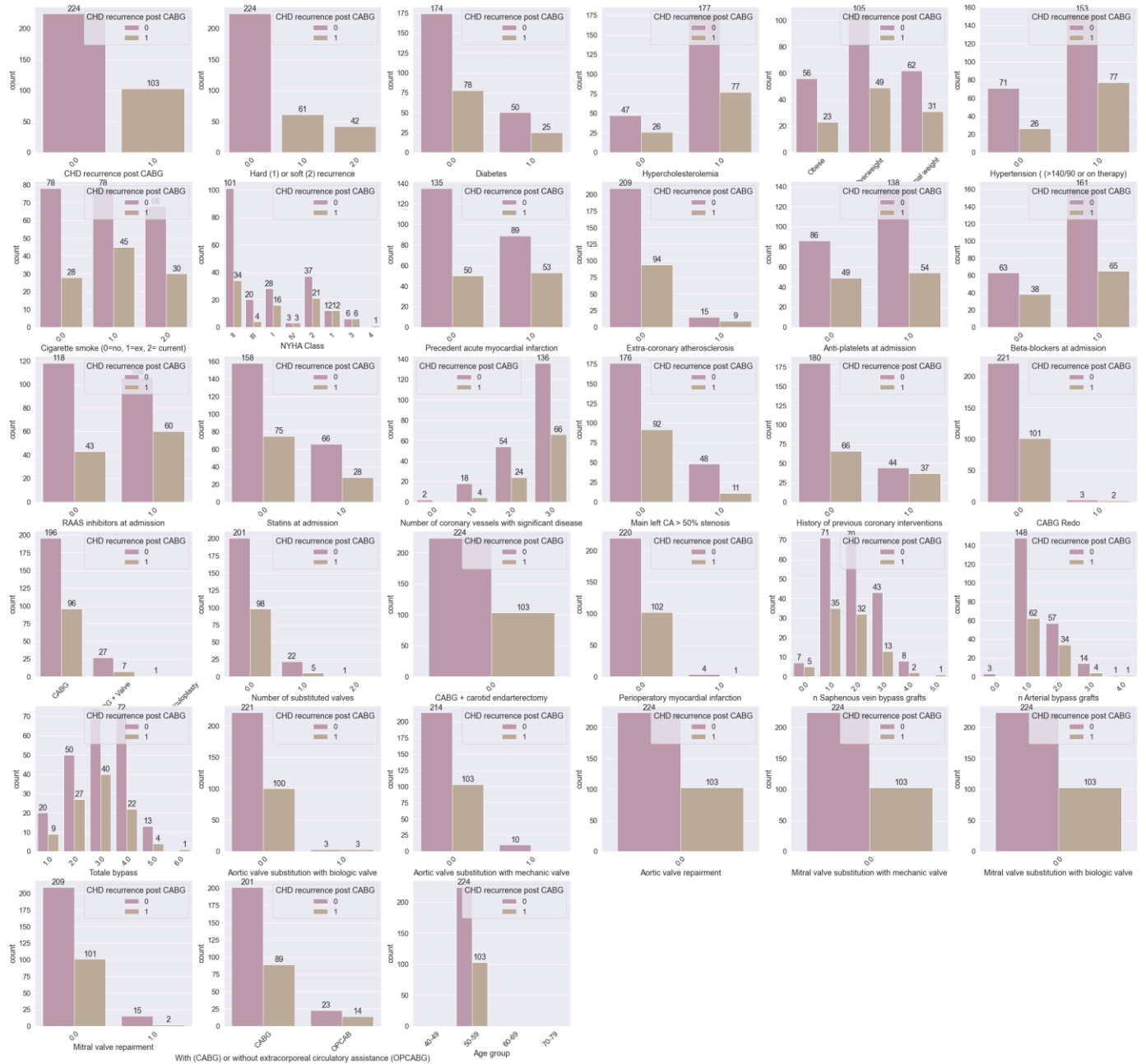


Figure 22: Age - 50-59

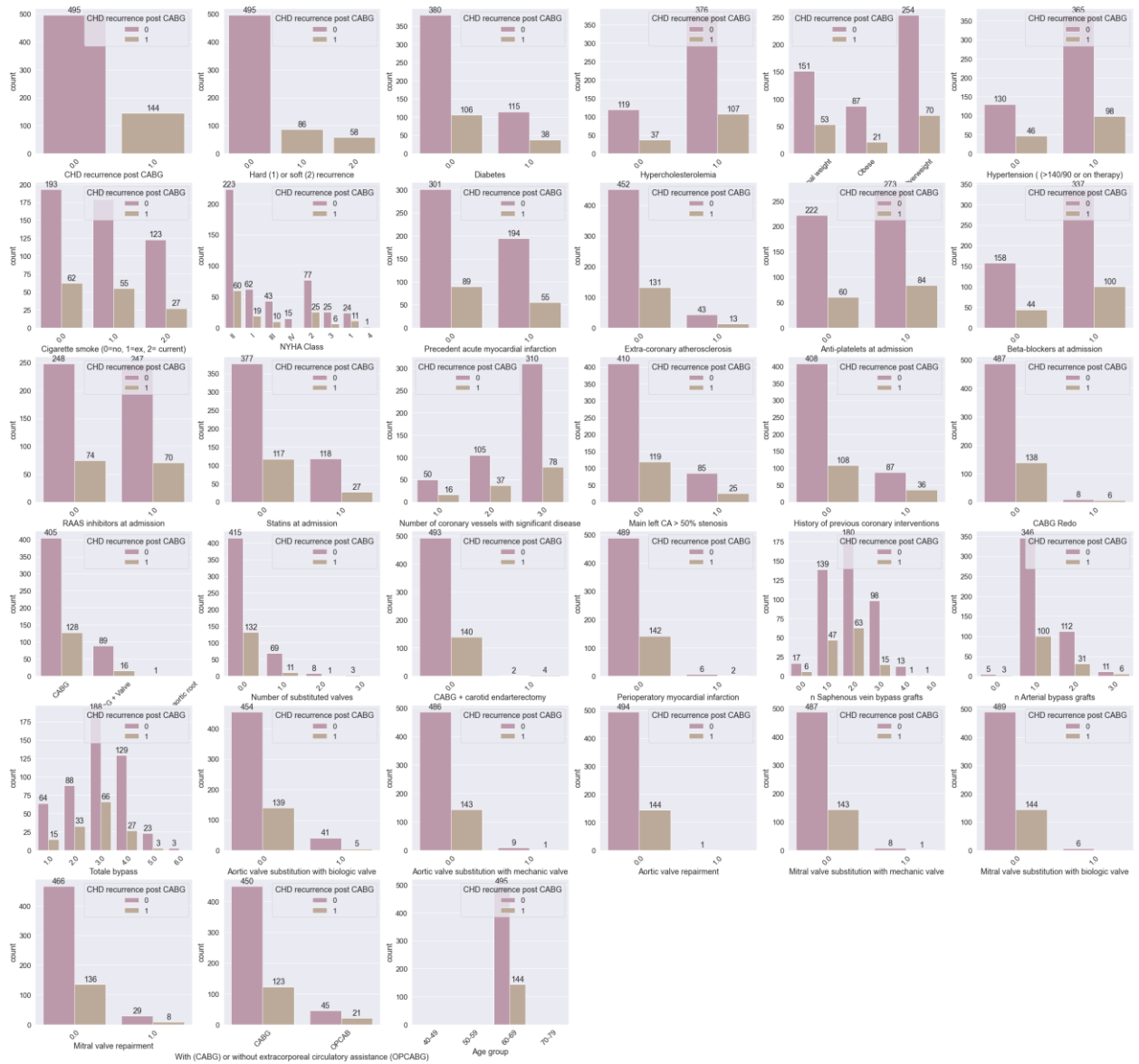


Figure 23: Age - 60-69

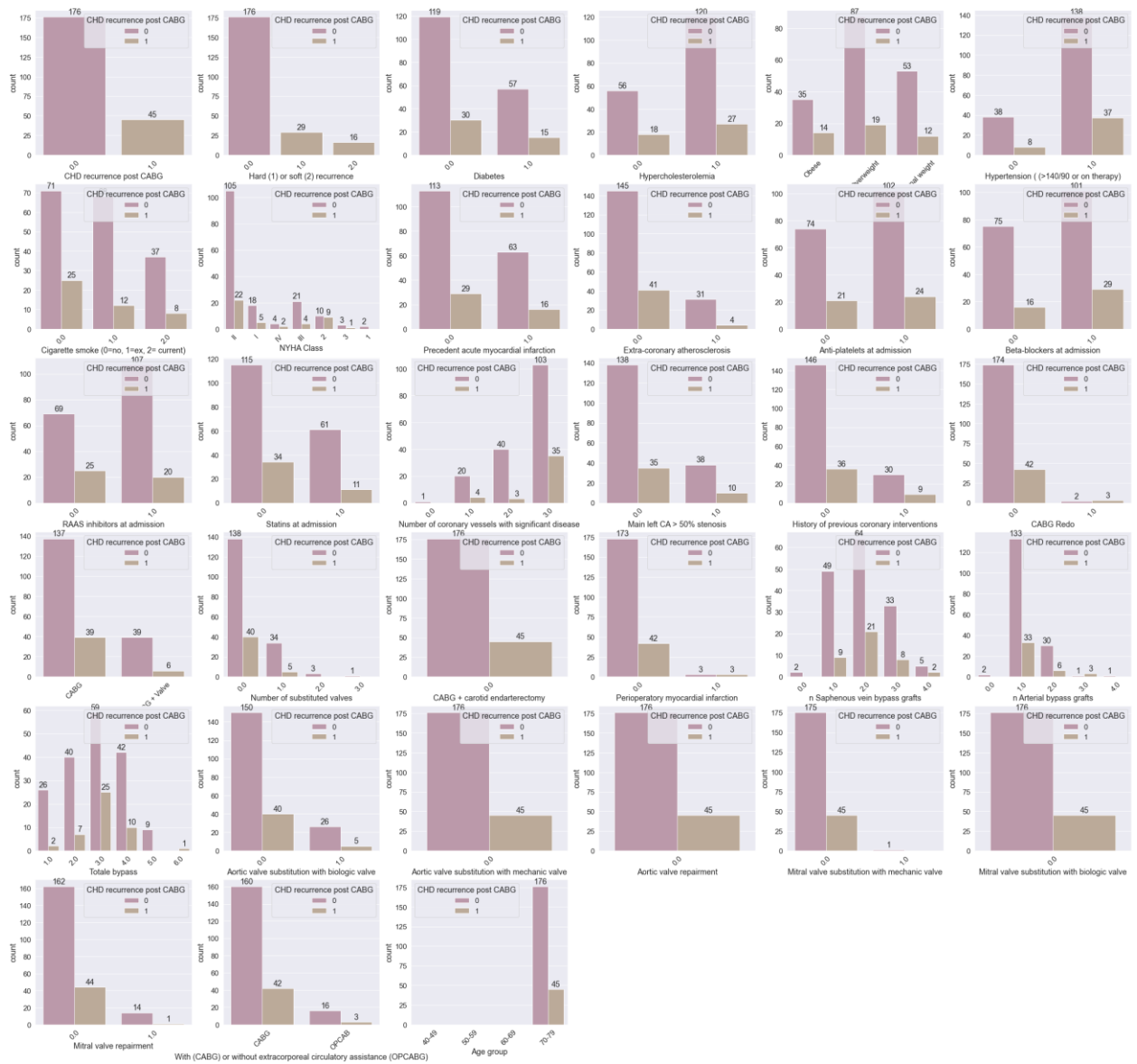


Figure 24: Age - 70-79

Statistical tests (chi2 test)

results_female - DataFrame

Index	Variable	Chi2	P-value
0	Hard (1) or soft (2) recurrence	132	2.17052e-29

Format Resize ☒ Background color ☒ Column min/max Save and Close Close

results_male - DataFrame

Index	Variable	Chi2	P-value
0	Hard (1) or soft (2) recurrence	1116	4.60977e-243
15	History of previous coronary interventions	11.5666	0.000671479
16	CABG Redo	5.6134	0.0178236
17	Isolated CABG or combined intervention	8.43143	0.0378881
18	Number of substituted valves	10.8567	0.0125268
19	CABG + carotid endarterectomy	5.49394	0.0190825
23	Totale bypass	14.0746	0.0151426

results_age1 - DataFrame

Index	Variable	Chi2	P-value
0	Hard (1) or soft (2) recurrence	60	9.35762e-14

results_age2 - DataFrame

Index	Variable	Chi2	P-value
0	Hard (1) or soft (2) recurrence	327	9.83676e-72
6	NYHA Class	14.7312	0.0396043
14	Main left CA > 50% stenosis	4.80995	0.0282959
15	History of previous coronary interventions	9.17986	0.00244693

results_age4 - DataFrame


	Index	Variable	Chi2	P-value
	0	Hard (1) or soft (2) recurrence	221	1.02438e-48
	23	Totale bypass	14.7144	0.0116551

results_age3 - DataFrame

	Index	Variable	Chi2	P-value
	0	Hard (1) or soft (2) recurrence	639	1.7495e-139
	19	CABG + carotid endarterectomy	4.44634	0.0349761

Statistical tests (mann whitney u test)

None in female

 results_nummale - DataFrame

Index	Variable	U Statistic	P-value
0	Age at CABG (years)	97013.5	3.70158e-05
1	Euroscore II	103030	0.00459664

None in age group 1

None in age 2

None in age 3

None in age 4