

EDA and some fittings

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EDA:

Summary of Mean:

##	ALP_mean	ALT_mean	AST_mean	Albumin_mean
##	Min. : 13.98	Min. : 1.91	Min. : 5.38	Min. : 1.200
##	1st Qu.: 57.05	1st Qu.: 17.87	1st Qu.: 24.71	1st Qu.: 2.567
##	Median : 76.61	Median : 30.73	Median : 43.67	Median : 3.100
##	Mean : 103.30	Mean : 154.23	Mean : 207.18	Mean : 3.027
##	3rd Qu.: 108.72	3rd Qu.: 69.53	3rd Qu.: 97.62	3rd Qu.: 3.500
##	Max. : 4025.52	Max. : 9059.72	Max. : 17995.50	Max. : 4.980
##	NA's : 4496	NA's : 4438	NA's : 4429	NA's : 4682
##	BUN_mean	Bilirubin_mean	Cholesterol_mean	Creatinine_mean
##	Min. : 2.276	Min. : 0.100	Min. : 35.95	Min. : 0.1000
##	1st Qu.: 12.890	1st Qu.: 0.400	1st Qu.: 129.40	1st Qu.: 0.7000
##	Median : 18.400	Median : 0.700	Median : 155.49	Median : 0.9583
##	Mean : 24.137	Mean : 1.618	Mean : 158.88	Mean : 1.3409
##	3rd Qu.: 28.343	3rd Qu.: 1.450	3rd Qu.: 186.18	3rd Qu.: 1.3900
##	Max. : 186.785	Max. : 74.837	Max. : 362.28	Max. : 17.3000
##	NA's : 82	NA's : 4424	NA's : 6595	NA's : 79
##	DiasABP_mean	FiO2_mean	GCS_mean	Glucose_mean
##	Min. : -1.00	Min. : 0.2100	Min. : 3.309	Min. : 41.17
##	1st Qu.: 53.98	1st Qu.: 0.4667	1st Qu.: 10.470	1st Qu.: 110.71
##	Median : 59.31	Median : 0.5564	Median : 13.386	Median : 128.00
##	Mean : 60.25	Mean : 0.6046	Mean : 12.555	Mean : 136.14
##	3rd Qu.: 65.99	3rd Qu.: 0.6811	3rd Qu.: 15.339	3rd Qu.: 151.34
##	Max. : 107.32	Max. : 1.9500	Max. : 15.850	Max. : 629.30
##	NA's : 2191	NA's : 2454	NA's : 103	NA's : 234
##	HCO3_mean	HCT_mean	HR_mean	K_mean
##	Min. : 9.085	Min. : 10.37	Min. : 35.94	Min. : 2.500
##	1st Qu.: 22.090	1st Qu.: 28.23	1st Qu.: 77.20	1st Qu.: 3.831
##	Median : 24.366	Median : 30.60	Median : 86.38	Median : 4.147
##	Mean : 24.432	Mean : 31.40	Mean : 87.13	Mean : 4.182
##	3rd Qu.: 26.507	3rd Qu.: 34.14	3rd Qu.: 96.76	3rd Qu.: 4.460
##	Max. : 51.445	Max. : 51.10	Max. : 144.25	Max. : 7.975
##	NA's : 120	NA's : 70	NA's : 103	NA's : 166
##	Lactate_mean	MAP_mean	MechVent_mean	Mg_mean
##	Min. : 0.400	Min. : 0.10	Min. : 1.010	Min. : 1.050
##	1st Qu.: 1.367	1st Qu.: 73.19	1st Qu.: 1.434	1st Qu.: 1.850
##	Median : 1.900	Median : 79.38	Median : 1.502	Median : 2.058
##	Mean : 2.263	Mean : 81.48	Mean : 1.501	Mean : 2.078
##	3rd Qu.: 2.733	3rd Qu.: 87.38	3rd Qu.: 1.567	3rd Qu.: 2.255

## Max. :16.400	Max. :298.18	Max. :1.970	Max. :7.546
## NA's :3568	NA's :2202	NA's :2729	NA's :212
## NIDiasABP_mean	NIMAP_mean	NISysABP_mean	Na_mean
## Min. : -1.00	Min. : 26.32	Min. : 0.05	Min. :110.7
## 1st Qu.: 50.09	1st Qu.: 68.47	1st Qu.:105.53	1st Qu.:136.9
## Median : 57.20	Median : 75.60	Median :116.55	Median :139.3
## Mean : 58.14	Mean : 77.07	Mean :118.28	Mean :139.3
## 3rd Qu.: 65.41	3rd Qu.: 84.42	3rd Qu.:130.05	3rd Qu.:141.6
## Max. :155.25	Max. :160.20	Max. :252.16	Max. :166.8
## NA's :948	NA's :957	NA's :932	NA's :128
## PaCO2_mean	PaO2_mean	Platelets_mean	RespRate_mean
## Min. :12.78	Min. : 26.68	Min. : 10.83	Min. :10.29
## 1st Qu.:36.94	1st Qu.:107.64	1st Qu.: 137.81	1st Qu.:17.39
## Median :40.45	Median :142.88	Median : 186.46	Median :19.52
## Mean :41.14	Mean :151.83	Mean : 203.84	Mean :20.02
## 3rd Qu.:44.01	3rd Qu.:185.46	3rd Qu.: 246.31	3rd Qu.:22.30
## Max. :91.69	Max. :500.54	Max. :1483.87	Max. :40.74
## NA's :1958	NA's :1967	NA's :106	NA's :5003
## SAPS_mean	SaO2_mean	SysABP_mean	Temp_mean
## Min. : 0.49	Min. : 46.62	Min. : 0.02	Min. :29.57
## 1st Qu.:11.38	1st Qu.: 96.86	1st Qu.:108.28	1st Qu.:36.67
## Median :15.14	Median : 97.88	Median :117.74	Median :37.03
## Mean :15.10	Mean : 97.29	Mean :119.89	Mean :37.02
## 3rd Qu.:18.72	3rd Qu.: 98.55	3rd Qu.:130.83	3rd Qu.:37.39
## Max. :33.19	Max. :100.99	Max. :199.31	Max. :39.45
## NA's :204	NA's :4061	NA's :2192	NA's :103
## TroponinI_mean	TroponinT_mean	Urine_mean	WBC_mean
## Min. : 0.100	Min. : 0.010	Min. : 0.35	Min. : 0.10
## 1st Qu.: 0.800	1st Qu.: 0.040	1st Qu.: 80.60	1st Qu.: 8.75
## Median : 3.100	Median : 0.132	Median : 118.23	Median : 11.45
## Mean : 8.759	Mean : 1.141	Mean : 140.77	Mean : 12.83
## 3rd Qu.:12.709	3rd Qu.: 0.744	3rd Qu.: 169.31	3rd Qu.: 14.85
## Max. :49.200	Max. :24.040	Max. :2803.86	Max. :2506.14
## NA's :6826	NA's :5751	NA's :168	NA's :116
## noLabel_mean	pH_mean		
## Min. :1.200	Min. : 0.400		
## 1st Qu.:2.500	1st Qu.: 7.355		
## Median :3.092	Median : 7.388		
## Mean :3.006	Mean : 7.441		
## 3rd Qu.:3.500	3rd Qu.: 7.420		
## Max. :6.200	Max. :100.080		
## NA's :6303	NA's :1937		

Summary of Max:

## ALP_max	ALT_max	AST_max	Albumin_max
## Min. : 13.98	Min. : 1.91	Min. : 5.38	Min. :1.200
## 1st Qu.: 58.78	1st Qu.: 18.28	1st Qu.: 25.15	1st Qu.:2.600
## Median : 78.91	Median : 32.06	Median : 46.74	Median :3.100
## Mean : 108.82	Mean : 199.37	Mean : 299.54	Mean :3.085
## 3rd Qu.: 113.00	3rd Qu.: 73.72	3rd Qu.: 110.22	3rd Qu.:3.570
## Max. :4106.49	Max. :12350.00	Max. :36400.00	Max. :4.980
## NA's :4496	NA's :4438	NA's :4429	NA's :4682
## BUN_max	Bilirubin_max	Cholesterol_max	Creatinine_max

##	Min.	: 3.06	Min.	: 0.100	Min.	: 35.95	Min.	: 0.100
##	1st Qu.:	14.64	1st Qu.:	0.400	1st Qu.:	129.53	1st Qu.:	0.800
##	Median	: 20.78	Median	: 0.700	Median	:155.59	Median	: 1.100
##	Mean	: 27.27	Mean	: 1.828	Mean	:159.08	Mean	: 1.538
##	3rd Qu.:	31.93	3rd Qu.:	1.600	3rd Qu.:	186.38	3rd Qu.:	1.700
##	Max.	:209.57	Max.	:82.800	Max.	:362.28	Max.	:22.100
##	NA's	:82	NA's	:4424	NA's	:6595	NA's	:79
##	DiasABP_max		FiO2_max		GCS_max		Glucose_max	
##	Min.	: -1.00	Min.	:0.210	Min.	: 3.66	Min.	: 47.52
##	1st Qu.:	71.79	1st Qu.:	0.500	1st Qu.:	14.93	1st Qu.:	121.97
##	Median	: 80.37	Median	:1.160	Median	:15.85	Median	: 145.66
##	Mean	: 83.04	Mean	:1.126	Mean	:14.66	Mean	: 165.50
##	3rd Qu.:	90.83	3rd Qu.:	1.670	3rd Qu.:	15.95	3rd Qu.:	182.21
##	Max.	:283.33	Max.	:2.000	Max.	:16.00	Max.	:1521.06
##	NA's	:2191	NA's	:2454	NA's	:103	NA's	:234
##	HCO3_max		HCT_max		HR_max		K_max	
##	Min.	:11.78	Min.	:10.43	Min.	: 55.64	Min.	: 2.50
##	1st Qu.:	23.51	1st Qu.:	30.50	1st Qu.:	95.81	1st Qu.:	4.10
##	Median	:25.75	Median	:33.30	Median	:108.81	Median	: 4.50
##	Mean	:25.92	Mean	:33.83	Mean	:111.14	Mean	: 4.57
##	3rd Qu.:	28.07	3rd Qu.:	36.70	3rd Qu.:	123.68	3rd Qu.:	4.80
##	Max.	:52.81	Max.	:61.20	Max.	:300.91	Max.	:22.90
##	NA's	:120	NA's	:70	NA's	:103	NA's	:166
##	Lactate_max		MAP_max		MechVent_max		Mg_max	
##	Min.	: 0.400	Min.	: 0.1	Min.	:1.010	Min.	: 1.100
##	1st Qu.:	1.500	1st Qu.:	96.9	1st Qu.:	1.840	1st Qu.:	2.100
##	Median	: 2.290	Median	:107.9	Median	:1.930	Median	: 2.300
##	Mean	: 2.916	Mean	:116.0	Mean	:1.873	Mean	: 2.351
##	3rd Qu.:	3.600	3rd Qu.:	123.0	3rd Qu.:	1.970	3rd Qu.:	2.600
##	Max.	:20.200	Max.	:300.7	Max.	:2.000	Max.	:29.130
##	NA's	:3568	NA's	:2202	NA's	:2729	NA's	:212
##	NIDiasABP_max		NIMAP_max		NISysABP_max		Na_max	
##	Min.	: -1.00	Min.	: 36.67	Min.	: 0.05	Min.	:112.5
##	1st Qu.:	66.05	1st Qu.:	83.63	1st Qu.:	125.95	1st Qu.:	138.3
##	Median	: 78.36	Median	: 95.60	Median	:141.98	Median	:140.7
##	Mean	: 78.78	Mean	: 96.36	Mean	:143.36	Mean	:140.9
##	3rd Qu.:	90.50	3rd Qu.:	107.08	3rd Qu.:	159.70	3rd Qu.:	143.2
##	Max.	:211.50	Max.	:228.04	Max.	:296.82	Max.	:177.8
##	NA's	:948	NA's	:957	NA's	:932	NA's	:128
##	PaCO2_max		PaO2_max		Platelets_max		RespRate_max	
##	Min.	: 17.02	Min.	: 26.68	Min.	: 13.38	Min.	: 14.25
##	1st Qu.:	41.09	1st Qu.:	141.22	1st Qu.:	157.66	1st Qu.:	24.71
##	Median	: 46.23	Median	:221.80	Median	: 207.40	Median	: 27.73
##	Mean	: 47.56	Mean	:245.78	Mean	: 227.66	Mean	: 29.24
##	3rd Qu.:	51.91	3rd Qu.:	349.24	3rd Qu.:	271.76	3rd Qu.:	32.07
##	Max.	:100.98	Max.	:501.00	Max.	:2292.39	Max.	:100.84
##	NA's	:1958	NA's	:1967	NA's	:106	NA's	:5003
##	SAPS_max		SaO2_max		SysABP_max		Temp_max	
##	Min.	: 0.49	Min.	: 46.62	Min.	: 0.02	Min.	:35.30
##	1st Qu.:	11.38	1st Qu.:	98.05	1st Qu.:	140.77	1st Qu.:	37.56
##	Median	:15.14	Median	: 98.75	Median	:156.10	Median	:37.90
##	Mean	:15.10	Mean	: 98.32	Mean	:157.80	Mean	:38.02
##	3rd Qu.:	18.72	3rd Qu.:	99.37	3rd Qu.:	173.76	3rd Qu.:	38.60
##	Max.	:33.19	Max.	:100.99	Max.	:289.41	Max.	:40.83

## NA's :204	NA's :4061	NA's :2192	NA's :103
## TroponinI_max	TroponinT_max	Urine_max	WBC_max
## Min. : 0.1	Min. : 0.010	Min. : 0.43	Min. : 0.10
## 1st Qu.: 0.9	1st Qu.: 0.050	1st Qu.: 300.38	1st Qu.: 9.90
## Median : 3.6	Median : 0.155	Median : 450.65	Median : 13.10
## Mean :10.4	Mean : 1.365	Mean : 602.00	Mean : 16.32
## 3rd Qu.:14.7	3rd Qu.: 0.850	3rd Qu.: 725.21	3rd Qu.: 17.40
## Max. :49.2	Max. :29.910	Max. :7400.62	Max. :12500.00
## NA's :6826	NA's :5751	NA's :168	NA's :116
## noLabel_max	pH_max		
## Min. :1.200	Min. : 0.400		
## 1st Qu.:2.600	1st Qu.: 7.400		
## Median :3.100	Median : 7.440		
## Mean :3.066	Mean : 7.701		
## 3rd Qu.:3.592	3rd Qu.: 7.480		
## Max. :8.600	Max. :733.410		
## NA's :6303	NA's :1937		

Summary of Min:

## ALP_min	ALT_min	AST_min	Albumin_min
## Min. : 13.05	Min. : 1.91	Min. : 5.16	Min. :1.100
## 1st Qu.: 55.06	1st Qu.: 17.14	1st Qu.: 23.36	1st Qu.:2.500
## Median : 74.01	Median : 28.98	Median : 39.19	Median :2.900
## Mean : 98.15	Mean : 113.46	Mean : 127.56	Mean :2.970
## 3rd Qu.: 104.20	3rd Qu.: 62.58	3rd Qu.: 84.62	3rd Qu.:3.445
## Max. :3931.37	Max. :6558.31	Max. :11760.00	Max. :4.980
## NA's :4496	NA's :4438	NA's :4429	NA's :4682
## BUN_min	Bilirubin_min	Cholesterol_min	Creatinine_min
## Min. : 0.69	Min. : 0.100	Min. : 35.95	Min. : 0.100
## 1st Qu.: 11.08	1st Qu.: 0.400	1st Qu.:129.07	1st Qu.: 0.600
## Median : 16.08	Median : 0.600	Median :155.29	Median : 0.800
## Mean : 21.12	Mean : 1.431	Mean :158.68	Mean : 1.163
## 3rd Qu.: 24.73	3rd Qu.: 1.300	3rd Qu.:186.18	3rd Qu.: 1.200
## Max. :168.14	Max. :62.200	Max. :362.28	Max. :17.300
## NA's :82	NA's :4424	NA's :6595	NA's :79
## DiasABP_min	FiO2_min	GCS_min	Glucose_min
## Min. : -1.00	Min. :0.2100	Min. : 3.000	Min. : 8.56
## 1st Qu.: 37.66	1st Qu.:0.4000	1st Qu.: 3.630	1st Qu.: 92.92
## Median : 43.73	Median :0.4000	Median : 8.550	Median :108.38
## Mean : 41.61	Mean :0.4463	Mean : 9.012	Mean :112.45
## 3rd Qu.: 50.08	3rd Qu.:0.5000	3rd Qu.:14.357	3rd Qu.:126.75
## Max. :103.22	Max. :1.9500	Max. :15.670	Max. :415.07
## NA's :2191	NA's :2454	NA's :103	NA's :234
## HCO3_min	HCT_min	HR_min	K_min
## Min. : 5.00	Min. : 5.50	Min. : 0.09	Min. :1.500
## 1st Qu.:20.35	1st Qu.:25.20	1st Qu.: 60.08	1st Qu.:3.500
## Median :22.97	Median :28.30	Median : 68.65	Median :3.800
## Mean :22.91	Mean :28.88	Mean : 69.16	Mean :3.837
## 3rd Qu.:25.40	3rd Qu.:32.20	3rd Qu.: 78.06	3rd Qu.:4.200
## Max. :50.42	Max. :50.60	Max. :126.04	Max. :6.810
## NA's :120	NA's :70	NA's :103	NA's :166
## Lactate_min	MAP_min	MechVent_min	Mg_min
## Min. : 0.30	Min. : 0.03	Min. :1.000	Min. :0.600

## 1st Qu.: 1.10	1st Qu.: 53.08	1st Qu.:1.030	1st Qu.:1.600
## Median : 1.40	Median : 59.01	Median :1.070	Median :1.800
## Mean : 1.72	Mean : 59.54	Mean :1.125	Mean :1.836
## 3rd Qu.: 2.02	3rd Qu.: 66.30	3rd Qu.:1.160	3rd Qu.:2.100
## Max. :15.30	Max. :298.18	Max. :1.970	Max. :4.900
## NA's :3568	NA's :2202	NA's :2729	NA's :212
## NIDiasABP_min	NIMAP_min	NISysABP_min	Na_min
## Min. : -1.00	Min. : 0.01	Min. : 0.00	Min. : 99.08
## 1st Qu.: 33.19	1st Qu.: 52.34	1st Qu.: 83.41	1st Qu.:135.34
## Median : 41.41	Median : 60.15	Median : 94.17	Median :137.90
## Mean : 41.39	Mean : 60.84	Mean : 93.34	Mean :137.66
## 3rd Qu.: 49.78	3rd Qu.: 68.49	3rd Qu.:106.59	3rd Qu.:140.28
## Max. :155.25	Max. :160.20	Max. :252.16	Max. :158.70
## NA's :948	NA's :957	NA's :932	NA's :128
## PaCO2_min	PaO2_min	Platelets_min	RespRate_min
## Min. : 0.30	Min. : 0.42	Min. : 5.55	Min. : 0.01
## 1st Qu.:31.28	1st Qu.: 70.13	1st Qu.:116.58	1st Qu.:10.59
## Median :34.96	Median : 84.64	Median :164.16	Median :12.81
## Mean :35.70	Mean : 96.62	Mean :181.59	Mean :12.79
## 3rd Qu.:39.20	3rd Qu.:110.52	3rd Qu.:225.37	3rd Qu.:15.18
## Max. :86.98	Max. :500.54	Max. :919.56	Max. :26.71
## NA's :1958	NA's :1967	NA's :106	NA's :5003
## SAPS_min	SaO2_min	SysABP_min	Temp_min
## Min. : 0.49	Min. : 0.49	Min. : 0.00	Min. : -17.80
## 1st Qu.:11.38	1st Qu.: 95.02	1st Qu.: 75.14	1st Qu.: 35.60
## Median :15.14	Median : 97.06	Median : 85.82	Median : 36.10
## Mean :15.10	Mean : 95.79	Mean : 81.90	Mean : 35.42
## 3rd Qu.:18.72	3rd Qu.: 98.12	3rd Qu.: 97.16	3rd Qu.: 36.40
## Max. :33.19	Max. :100.99	Max. :199.31	Max. : 38.80
## NA's :204	NA's :4061	NA's :2192	NA's :103
## TroponinI_min	TroponinT_min	Urine_min	WBC_min
## Min. : 0.100	Min. : 0.010	Min. : 0.00	Min. : 0.10
## 1st Qu.: 0.600	1st Qu.: 0.030	1st Qu.: 0.70	1st Qu.: 7.30
## Median : 1.730	Median : 0.100	Median : 15.47	Median : 9.70
## Mean : 7.101	Mean : 0.922	Mean : 28.36	Mean : 10.59
## 3rd Qu.: 8.700	3rd Qu.: 0.530	3rd Qu.: 30.37	3rd Qu.: 12.80
## Max. :49.200	Max. :24.040	Max. :1000.16	Max. :201.60
## NA's :6826	NA's :5751	NA's :168	NA's :116
## noLabel_min	pH_min		
## Min. :1.200	Min. : 0.240		
## 1st Qu.:2.500	1st Qu.: 7.280		
## Median :2.900	Median : 7.330		
## Mean :2.947	Mean : 7.357		
## 3rd Qu.:3.400	3rd Qu.: 7.380		
## Max. :4.660	Max. :100.080		
## NA's :6303	NA's :1937		

Summary of Range:

## ALP_range	ALT_range	AST_range	Albumin_range
## Min. : 0.00	Min. : 0.00	Min. : 0.0	Min. :0.000
## 1st Qu.: 0.00	1st Qu.: 0.00	1st Qu.: 0.0	1st Qu.:0.000
## Median : 0.00	Median : 0.00	Median : 0.0	Median :0.000
## Mean : 10.67	Mean : 85.92	Mean : 172.0	Mean :0.116

## 3rd Qu.: 8.33	3rd Qu.: 6.11	3rd Qu.: 14.4	3rd Qu.:0.075
## Max. :528.64	Max. :11618.00	Max. :35230.5	Max. :1.900
## NA's :4496	NA's :4438	NA's :4429	NA's :4682
## BUN_range	Bilirubin_range	Cholesterol_range	Creatinine_range
## Min. : 0.000	Min. : 0.000	Min. : 0.000	Min. : 0.0000
## 1st Qu.: 1.740	1st Qu.: 0.000	1st Qu.: 0.000	1st Qu.: 0.1000
## Median : 4.060	Median : 0.000	Median : 0.000	Median : 0.2000
## Mean : 6.155	Mean : 0.397	Mean : 0.397	Mean : 0.3751
## 3rd Qu.: 7.685	3rd Qu.: 0.210	3rd Qu.: 0.000	3rd Qu.: 0.4900
## Max. :93.130	Max. :23.400	Max. :35.020	Max. :11.7700
## NA's :82	NA's :4424	NA's :6595	NA's :79
## DiasABP_range	FiO2_range	GCS_range	Glucose_range
## Min. : 0.00	Min. :0.0000	Min. : 0.000	Min. : 0.000
## 1st Qu.: 27.42	1st Qu.:0.1000	1st Qu.: 1.353	1st Qu.: 9.255
## Median : 35.62	Median :0.7100	Median : 4.900	Median : 31.210
## Mean : 41.43	Mean :0.6798	Mean : 5.650	Mean : 53.044
## 3rd Qu.: 48.09	3rd Qu.:1.2000	3rd Qu.: 8.938	3rd Qu.: 64.545
## Max. :259.77	Max. :1.7800	Max. :12.990	Max. :1391.020
## NA's :2191	NA's :2454	NA's :103	NA's :234
## HCO3_range	HCT_range	HR_range	K_range
## Min. : 0.000	Min. : 0.000	Min. : 0.92	Min. : 0.0000
## 1st Qu.: 1.050	1st Qu.: 2.000	1st Qu.: 28.79	1st Qu.: 0.2000
## Median : 2.520	Median : 4.200	Median : 37.98	Median : 0.6000
## Mean : 3.013	Mean : 4.955	Mean : 41.98	Mean : 0.7328
## 3rd Qu.: 4.300	3rd Qu.: 7.100	3rd Qu.: 50.66	3rd Qu.: 1.0000
## Max. :28.810	Max. :35.000	Max. :242.88	Max. :20.8000
## NA's :120	NA's :70	NA's :103	NA's :166
## Lactate_range	MAP_range	MechVent_range	Mg_range
## Min. : 0.000	Min. : 0.00	Min. :0.0000	Min. : 0.0000
## 1st Qu.: 0.000	1st Qu.: 36.18	1st Qu.:0.6700	1st Qu.: 0.1000
## Median : 0.400	Median : 47.43	Median :0.8200	Median : 0.4000
## Mean : 1.196	Mean : 56.42	Mean :0.7484	Mean : 0.5153
## 3rd Qu.: 1.600	3rd Qu.: 64.20	3rd Qu.:0.9000	3rd Qu.: 0.8000
## Max. :19.460	Max. :257.20	Max. :1.0000	Max. :27.3300
## NA's :3568	NA's :2202	NA's :2729	NA's :212
## NIDiasABP_range	NIMAP_range	NISysABP_range	Na_range
## Min. : 0.00	Min. : 0.00	Min. : 0.00	Min. : 0.000
## 1st Qu.: 22.47	1st Qu.: 21.92	1st Qu.: 30.07	1st Qu.: 1.040
## Median : 35.79	Median : 34.88	Median : 47.02	Median : 2.560
## Mean : 37.39	Mean : 35.52	Mean : 50.02	Mean : 3.205
## 3rd Qu.: 50.00	3rd Qu.: 46.66	3rd Qu.: 64.58	3rd Qu.: 4.540
## Max. :172.16	Max. :178.98	Max. :238.59	Max. :42.950
## NA's :948	NA's :957	NA's :932	NA's :128
## PaCO2_range	PaO2_range	Platelets_range	RespRate_range
## Min. : 0.00	Min. : 0.00	Min. : 0.00	Min. : 0.00
## 1st Qu.: 5.21	1st Qu.: 44.19	1st Qu.: 13.69	1st Qu.:12.04
## Median :10.70	Median :121.76	Median : 33.86	Median :14.73
## Mean :11.86	Mean :149.16	Mean : 46.07	Mean :16.45
## 3rd Qu.:16.59	3rd Qu.:252.61	3rd Qu.: 64.77	3rd Qu.:19.09
## Max. :74.67	Max. :445.50	Max. :1445.22	Max. :91.00
## NA's :1958	NA's :1967	NA's :106	NA's :5003
## SAPS_range	SaO2_range	SysABP_range	Temp_range
## Min. :0	Min. : 0.00	Min. : 0.00	Min. : 0.000
## 1st Qu.:0	1st Qu.: 0.00	1st Qu.: 52.66	1st Qu.: 1.400

##	Median :0	Median : 1.48	Median : 68.43	Median : 1.900
##	Mean :0	Mean : 2.53	Mean : 75.90	Mean : 2.603
##	3rd Qu.:0	3rd Qu.: 3.24	3rd Qu.: 90.24	3rd Qu.: 2.530
##	Max. :0	Max. :97.53	Max. :265.66	Max. :57.000
##	NA's :204	NA's :4061	NA's :2192	NA's :103
##	TroponinI_range	TroponinT_range	Urine_range	WBC_range
##	Min. : 0.000	Min. : 0.000	Min. : 0.0	Min. : 0.000
##	1st Qu.: 0.000	1st Qu.: 0.000	1st Qu.: 265.7	1st Qu.: 0.930
##	Median : 0.100	Median : 0.010	Median : 420.1	Median : 2.800
##	Mean : 3.298	Mean : 0.443	Mean : 573.6	Mean : 5.723
##	3rd Qu.: 2.295	3rd Qu.: 0.140	3rd Qu.: 694.9	3rd Qu.: 5.300
##	Max. :48.000	Max. :29.330	Max. :7299.7	Max. :12496.500
##	NA's :6826	NA's :5751	NA's :168	NA's :116
##	noLabel_range	pH_range		
##	Min. :0.00	Min. : 0.0000		
##	1st Qu.:0.00	1st Qu.: 0.0500		
##	Median :0.00	Median : 0.1000		
##	Mean :0.12	Mean : 0.3439		
##	3rd Qu.:0.10	3rd Qu.: 0.1600		
##	Max. :4.80	Max. :726.1600		
##	NA's :6303	NA's :1937		

Summary of changeStoF:

##	ALP_changeStoF	ALT_changeStoF	AST_changeStoF	Albumin_changeStoF
##	Min. : -528.640	Min. : -6999.590	Min. : -18170.200	Min. : -1.710
##	1st Qu.: 0.000	1st Qu.: -0.095	1st Qu.: -1.067	1st Qu.: 0.000
##	Median : 0.000	Median : 0.000	Median : 0.000	Median : 0.000
##	Mean : -3.698	Mean : 7.977	Mean : -31.713	Mean : -0.034
##	3rd Qu.: 0.000	3rd Qu.: 0.000	3rd Qu.: 0.000	3rd Qu.: 0.000
##	Max. : 413.530	Max. : 11618.000	Max. : 19620.500	Max. : 1.800
##	NA's :4496	NA's :4438	NA's :4429	NA's :4682
##	BUN_changeStoF	Bilirubin_changeStoF	Cholesterol_changeStoF	
##	Min. : -91.2200	Min. : -20.600	Min. : -35.020	
##	1st Qu.: -3.6600	1st Qu.: 0.000	1st Qu.: 0.000	
##	Median : 0.0000	Median : 0.000	Median : 0.000	
##	Mean : -0.7238	Mean : -0.061	Mean : -0.221	
##	3rd Qu.: 3.0400	3rd Qu.: 0.000	3rd Qu.: 0.000	
##	Max. : 93.1300	Max. : 23.400	Max. : 14.360	
##	NA's :82	NA's :4424	NA's :6595	
##	Creatinine_changeStoF	DiasABP_changeStoF	FiO2_changeStoF	GCS_changeStoF
##	Min. : -9.10000	Min. : -190.7400	Min. : -1.7100	Min. : -12.850
##	1st Qu.: -0.12000	1st Qu.: -10.8600	1st Qu.: -0.9600	1st Qu.: -0.250
##	Median : 0.00000	Median : -1.1400	Median : -0.2000	Median : 0.590
##	Mean : -0.01948	Mean : 0.4793	Mean : -0.4722	Mean : 2.688
##	3rd Qu.: 0.10000	3rd Qu.: 8.9200	3rd Qu.: 0.0000	3rd Qu.: 5.810
##	Max. : 5.50000	Max. : 207.9200	Max. : 1.6200	Max. : 12.970
##	NA's :79	NA's :2191	NA's :2454	NA's :103
##	Glucose_changeStoF	HCO3_changeStoF	HCT_changeStoF	HR_changeStoF
##	Min. : -1391.020	Min. : -23.460	Min. : -24.0000	Min. : -115.150
##	1st Qu.: -33.855	1st Qu.: -0.690	1st Qu.: -3.6000	1st Qu.: -15.220
##	Median : -2.500	Median : 0.540	Median : -0.8000	Median : -2.900
##	Mean : -16.761	Mean : 1.033	Mean : -0.9629	Mean : -3.368
##	3rd Qu.: 9.005	3rd Qu.: 2.800	3rd Qu.: 1.3000	3rd Qu.: 8.787

## Max. : 1246.560	Max. : 19.540	Max. : 23.8500	Max. : 106.920
## NA's :234	NA's :120	NA's :70	NA's :103
## K_changeStoF	Lactate_changeStoF	MAP_changeStoF	MechVent_changeStoF
## Min. :-15.30000	Min. :-14.030	Min. :-233.530	Min. :-0.9700
## 1st Qu.: -0.45500	1st Qu.: -0.880	1st Qu.: -14.195	1st Qu.: -0.2900
## Median : 0.00000	Median : 0.000	Median : -1.330	Median : 0.0000
## Mean : -0.09679	Mean : -0.636	Mean : -1.524	Mean : 0.0003
## 3rd Qu.: 0.30000	3rd Qu.: 0.000	3rd Qu.: 11.015	3rd Qu.: 0.2825
## Max. : 5.30000	Max. : 8.290	Max. : 254.960	Max. : 0.9800
## NA's :166	NA's :3568	NA's :2202	NA's :2729
## Mg_changeStoF	NIDiasABP_changeStoF	NIMAP_changeStoF	NISysABP_changeStoF
## Min. :-27.330	Min. :-102.280	Min. :-97.480	Min. :-182.830
## 1st Qu.: -0.100	1st Qu.: -11.980	1st Qu.: -11.890	1st Qu.: -16.440
## Median : 0.000	Median : -0.920	Median : -0.340	Median : -0.020
## Mean : 0.101	Mean : -2.544	Mean : -1.929	Mean : -2.225
## 3rd Qu.: 0.400	3rd Qu.: 7.390	3rd Qu.: 8.330	3rd Qu.: 12.390
## Max. : 15.900	Max. : 92.710	Max. :151.940	Max. : 173.230
## NA's :212	NA's :948	NA's :957	NA's :932
## Na_changeStoF	PaCO2_changeStoF	PaO2_changeStoF	Platelets_changeStoF
## Min. :-25.86000	Min. :-48.5100	Min. :-431.99	Min. :-1111.310
## 1st Qu.: -1.97000	1st Qu.: -5.0550	1st Qu.: -182.98	1st Qu.: -41.160
## Median : 0.00000	Median : 0.0000	Median : -48.91	Median : -10.830
## Mean : -0.06032	Mean : -0.9789	Mean : -89.89	Mean : -20.122
## 3rd Qu.: 1.69000	3rd Qu.: 4.0850	3rd Qu.: 0.00	3rd Qu.: 5.075
## Max. : 38.07000	Max. : 43.1500	Max. : 330.97	Max. : 272.090
## NA's :128	NA's :1958	NA's :1967	NA's :106
## RespRate_changeStoF	SAPS_changeStoF	SaO2_changeStoF	SysABP_changeStoF
## Min. :-84.990	Min. :0	Min. :-43.390	Min. :-194.240
## 1st Qu.: -3.658	1st Qu.:0	1st Qu.: -1.030	1st Qu.: -18.270
## Median : 0.025	Median :0	Median : 0.000	Median : 0.250
## Mean : -0.046	Mean :0	Mean : -0.097	Mean : 3.001
## 3rd Qu.: 3.985	3rd Qu.:0	3rd Qu.: 0.250	3rd Qu.: 19.980
## Max. : 56.430	Max. :0	Max. : 95.330	Max. : 190.400
## NA's :5003	NA's :204	NA's :4061	NA's :2192
## Temp_changeStoF	TroponinI_changeStoF	TroponinT_changeStoF	
## Min. :-55.0000	Min. :-35.500	Min. :-16.050	
## 1st Qu.: -0.3000	1st Qu.: -0.400	1st Qu.: -0.010	
## Median : 0.4000	Median : 0.000	Median : 0.000	
## Mean : 0.5473	Mean : -0.398	Mean : -0.125	
## 3rd Qu.: 1.2000	3rd Qu.: 0.000	3rd Qu.: 0.000	
## Max. : 56.0000	Max. : 44.130	Max. : 21.490	
## NA's :103	NA's :6826	NA's :5751	
## Urine_changeStoF	WBC_changeStoF	noLabel_changeStoF	pH_changeStoF
## Min. :-6420.46	Min. :-265.1800	Min. :-1.520	Min. :-93.3700
## 1st Qu.: -309.76	1st Qu.: -2.5000	1st Qu.: 0.000	1st Qu.: -0.0200
## Median : -80.38	Median : 0.0000	Median : 0.000	Median : 0.0100
## Mean : -212.03	Mean : -0.6064	Mean : -0.031	Mean : -0.0275
## 3rd Qu.: 20.20	3rd Qu.: 1.5000	3rd Qu.: 0.000	3rd Qu.: 0.0700
## Max. : 2270.42	Max. : 37.7600	Max. : 4.800	Max. : 4.8300
## NA's :168	NA's :116	NA's :6303	NA's :1937

Summary of numTest:

## ALP_numTest	ALT_numTest	AST_numTest	Albumin_numTest
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##	Min. : 1.000	Min. : 1.000	Min. : 1.000	Min. :1.000
##	1st Qu.: 1.000	1st Qu.: 1.000	1st Qu.: 1.000	1st Qu.:1.000
##	Median : 1.000	Median : 1.000	Median : 1.000	Median :1.000
##	Mean : 1.682	Mean : 1.688	Mean : 1.702	Mean :1.393
##	3rd Qu.: 2.000	3rd Qu.: 2.000	3rd Qu.: 2.000	3rd Qu.:2.000
##	Max. :11.000	Max. :10.000	Max. :11.000	Max. :9.000
##	NA's :4496	NA's :4438	NA's :4429	NA's :4682
##	BUN_numTest	Bilirubin_numTest	Cholesterol_numTest	Creatinine_numTest
##	Min. : 1.000	Min. : 1.000	Min. :1.000	Min. : 1.000
##	1st Qu.: 2.000	1st Qu.: 1.000	1st Qu.:1.000	1st Qu.: 2.000
##	Median : 3.000	Median : 1.000	Median :1.000	Median : 3.000
##	Mean : 2.952	Mean : 1.713	Mean :1.034	Mean : 2.945
##	3rd Qu.: 4.000	3rd Qu.: 2.000	3rd Qu.:1.000	3rd Qu.: 4.000
##	Max. :15.000	Max. :10.000	Max. :2.000	Max. :20.000
##	NA's :82	NA's :4424	NA's :6595	NA's :79
##	DiasABP_numTest	FiO2_numTest	GCS_numTest	Glucose_numTest
##	Min. : 1.00	Min. : 1.000	Min. : 1.00	Min. : 1.000
##	1st Qu.: 34.00	1st Qu.: 6.000	1st Qu.:10.00	1st Qu.: 2.000
##	Median : 45.00	Median :10.000	Median :11.00	Median : 3.000
##	Mean : 44.21	Mean : 9.666	Mean :13.24	Mean : 2.804
##	3rd Qu.: 55.00	3rd Qu.:13.000	3rd Qu.:14.00	3rd Qu.: 3.000
##	Max. :145.00	Max. :37.000	Max. :45.00	Max. :18.000
##	NA's :2191	NA's :2454	NA's :103	NA's :234
##	HCO3_numTest	HCT_numTest	HR_numTest	K_numTest
##	Min. : 1.000	Min. : 1.000	Min. : 5.00	Min. : 1.000
##	1st Qu.: 2.000	1st Qu.: 2.000	1st Qu.: 41.00	1st Qu.: 2.000
##	Median : 3.000	Median : 3.000	Median : 47.00	Median : 3.000
##	Mean : 2.895	Mean : 3.981	Mean : 49.15	Mean : 3.099
##	3rd Qu.: 3.000	3rd Qu.: 5.000	3rd Qu.: 55.00	3rd Qu.: 4.000
##	Max. :19.000	Max. :20.000	Max. :152.00	Max. :18.000
##	NA's :120	NA's :70	NA's :103	NA's :166
##	Lactate_numTest	MAP_numTest	MechVent_numTest	Mg_numTest
##	Min. : 1.000	Min. : 1.00	Min. : 1.000	Min. : 1.000
##	1st Qu.: 1.000	1st Qu.: 34.00	1st Qu.: 6.000	1st Qu.: 2.000
##	Median : 2.000	Median : 45.00	Median :10.000	Median : 3.000
##	Mean : 3.113	Mean : 44.37	Mean : 9.777	Mean : 2.938
##	3rd Qu.: 4.000	3rd Qu.: 55.00	3rd Qu.:13.000	3rd Qu.: 4.000
##	Max. :20.000	Max. :158.00	Max. :34.000	Max. :18.000
##	NA's :3568	NA's :2202	NA's :2729	NA's :212
##	NIDiasABP_numTest	NIMAP_numTest	NISysABP_numTest	Na_numTest
##	Min. : 1.0	Min. : 1.00	Min. : 1.00	Min. : 1.000
##	1st Qu.: 8.0	1st Qu.: 8.00	1st Qu.: 8.00	1st Qu.: 2.000
##	Median :23.0	Median :23.00	Median :23.00	Median : 3.000
##	Mean :24.3	Mean :23.92	Mean :24.23	Mean : 2.891
##	3rd Qu.:39.0	3rd Qu.:38.00	3rd Qu.:39.00	3rd Qu.: 4.000
##	Max. :97.0	Max. :95.00	Max. :98.00	Max. :23.000
##	NA's :948	NA's :957	NA's :932	NA's :128
##	PaCO2_numTest	PaO2_numTest	Platelets_numTest	RespRate_numTest
##	Min. : 1.000	Min. : 1.00	Min. : 1.000	Min. : 1.00
##	1st Qu.: 3.000	1st Qu.: 3.00	1st Qu.: 2.000	1st Qu.:37.00
##	Median : 6.000	Median : 6.00	Median : 3.000	Median :42.00
##	Mean : 6.536	Mean : 6.54	Mean : 3.051	Mean :42.24
##	3rd Qu.: 9.000	3rd Qu.: 9.00	3rd Qu.: 4.000	3rd Qu.:47.00
##	Max. :32.000	Max. :37.00	Max. :24.000	Max. :97.00

```

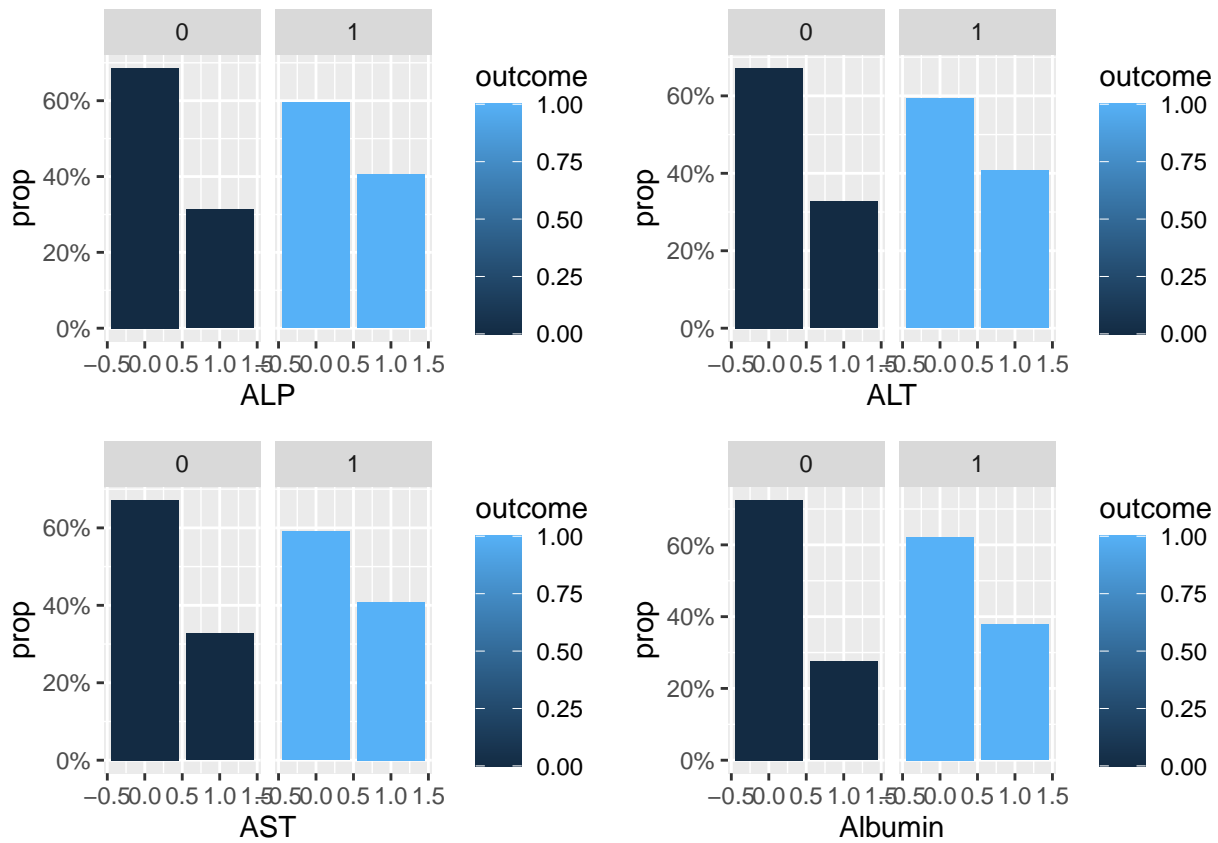
## NA's :1958      NA's :1967      NA's :106      NA's :5003
## SAPS_numTest  SaO2_numTest  SysABP_numTest  Temp_numTest
## Min. :1      Min. : 1.00      Min. : 1.00      Min. : 1.00
## 1st Qu.:1      1st Qu.: 1.00      1st Qu.: 34.00      1st Qu.: 10.00
## Median :1      Median : 3.00      Median : 45.00      Median : 12.00
## Mean :1      Mean : 3.94      Mean : 44.19      Mean : 18.95
## 3rd Qu.:1      3rd Qu.: 5.00      3rd Qu.: 55.00      3rd Qu.: 23.00
## Max. :1      Max. :22.00      Max. :138.00      Max. :116.00
## NA's :204      NA's :4061      NA's :2192      NA's :103
## TroponinI_numTest TroponinT_numTest Urine_numTest  WBC_numTest
## Min. :1.000      Min. :1.000      Min. : 1.00      Min. : 1.000
## 1st Qu.:1.000      1st Qu.:1.000      1st Qu.:25.00      1st Qu.: 2.000
## Median :2.000      Median :2.000      Median :32.00      Median : 3.000
## Mean :1.962      Mean :2.087      Mean :30.12      Mean : 2.797
## 3rd Qu.:3.000      3rd Qu.:3.000      3rd Qu.:37.00      3rd Qu.: 3.000
## Max. :6.000      Max. :7.000      Max. :65.00      Max. :15.000
## NA's :6826      NA's :5751      NA's :168      NA's :116
## noLabel_numTest  pH_numTest
## Min. :1.000      Min. : 1.000
## 1st Qu.:1.000      1st Qu.: 3.000
## Median :1.000      Median : 6.000
## Mean :1.392      Mean : 6.839
## 3rd Qu.:2.000      3rd Qu.:10.000
## Max. :9.000      Max. :34.000
## NA's :6303      NA's :1937

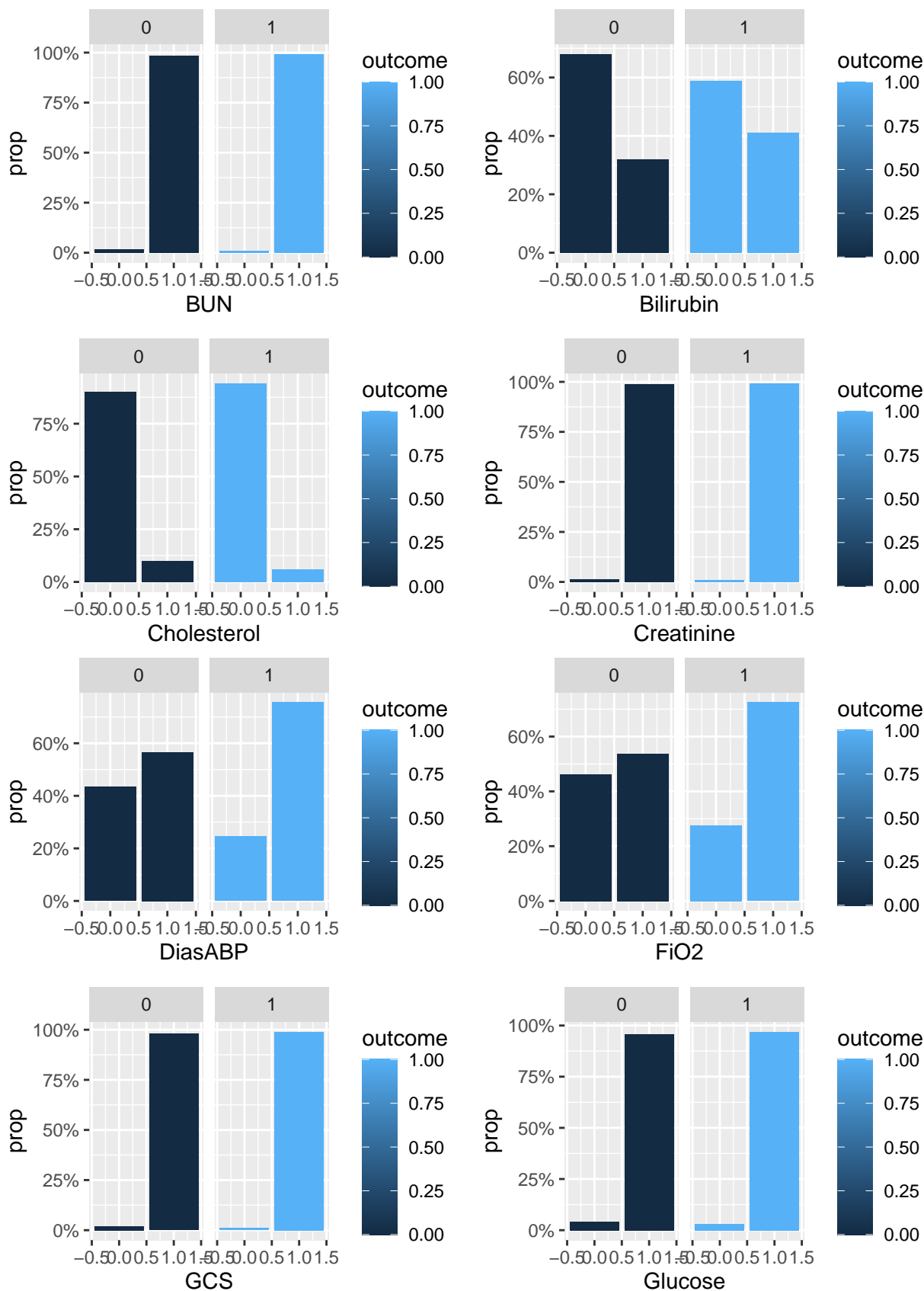
## NA Percentage of NA
## ALP      4496      0.634222034
## ALT      4438      0.626040344
## AST      4429      0.624770772
## Albumin  4682      0.660459867
## BUN      82      0.011567217
## Bilirubin 4424      0.624065454
## Cholesterol 6595      0.930314572
## Creatinine 79      0.011144026
## DiasABP  2191      0.309070391
## FiO2     2454      0.346170123
## GCS      103      0.014529553
## Glucose  234      0.033008887
## HCO3     120      0.016927634
## HCT      70      0.009874453
## HR       103      0.014529553
## K        166      0.023416561
## Lactate  3568      0.503314995
## MAP      2202      0.310622091
## MechVent 2729      0.384962618
## Mg       212      0.029905487
## NIDiasABP 948      0.133728311
## NIMAP     957      0.134997884
## NISysABP  932      0.131471294
## Na       128      0.018056143
## PaCO2    1958      0.276202567
## PaO2     1967      0.277472140
## Platelets 106      0.014952744

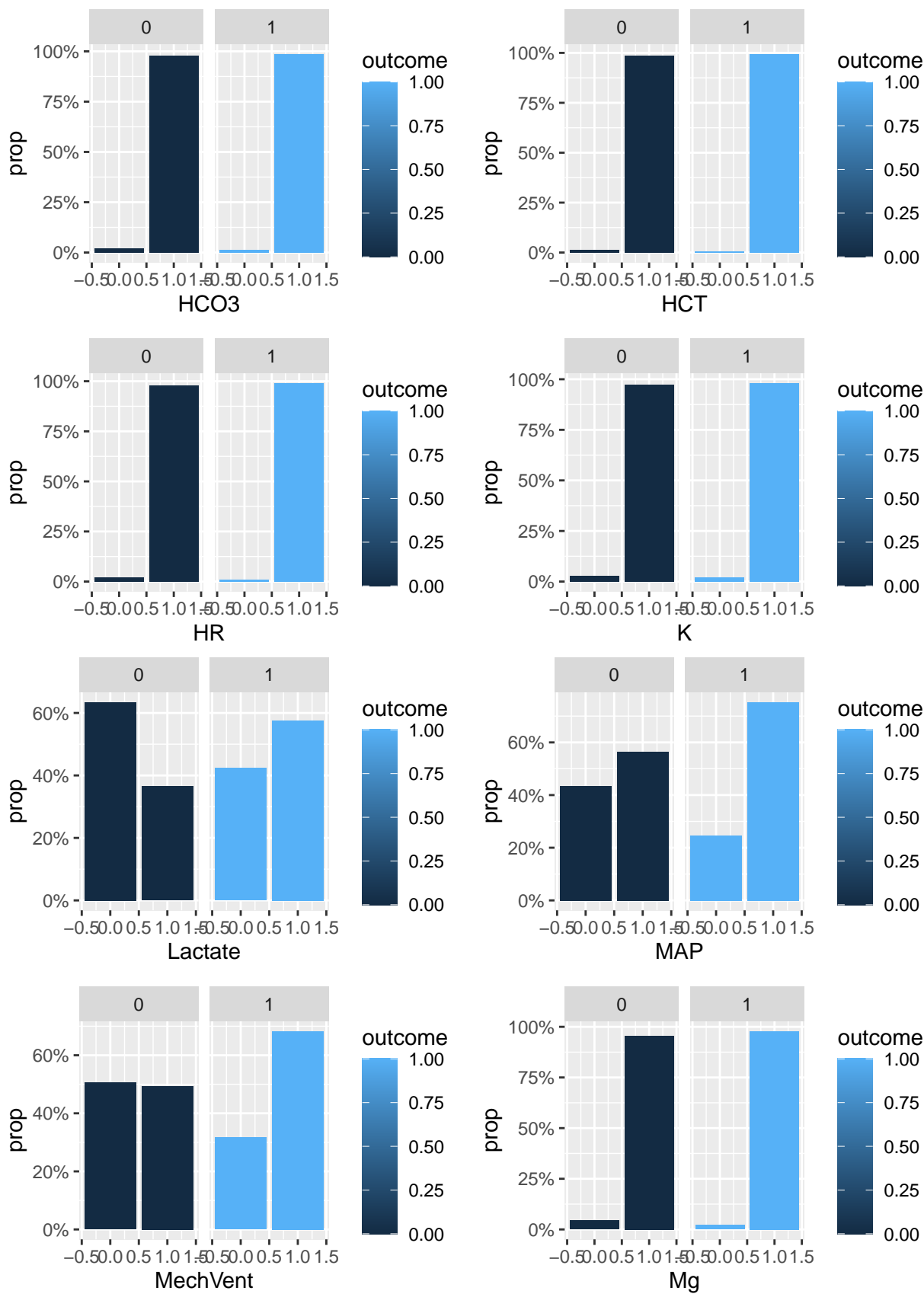
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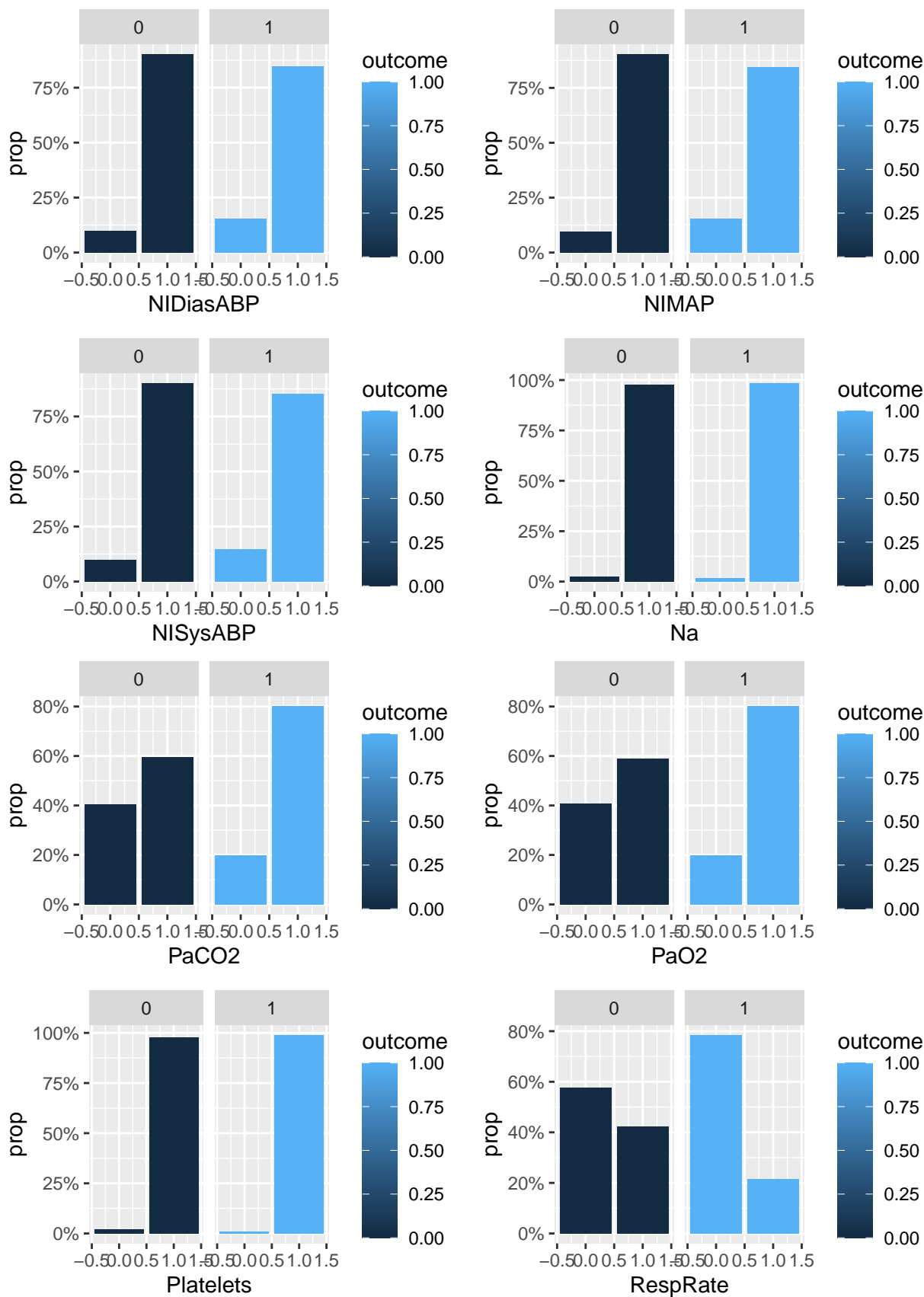
## RespRate	5003	0.705741289
## SAPS	204	0.028776978
## SaO2	4061	0.572859360
## SysABP	2192	0.309211454
## Temp	103	0.014529553
## TroponinI	6826	0.962900268
## TroponinT	5751	0.811256877
## Urine	168	0.023698688
## WBC	116	0.016363380
## noLabel	6303	0.889123995
## pH	1937	0.273240231

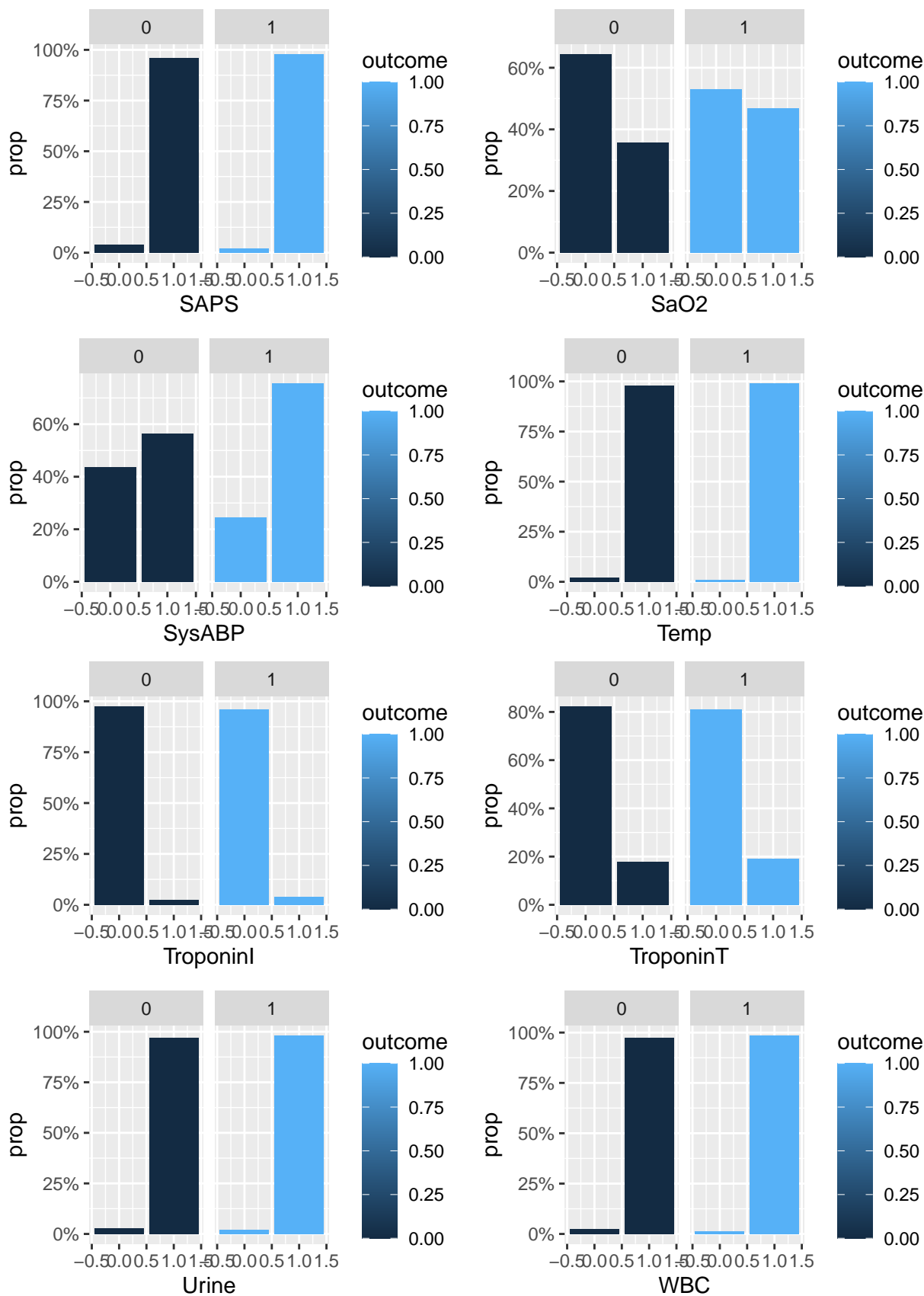
Explore whether the high percentage of NA will affect the outcome.

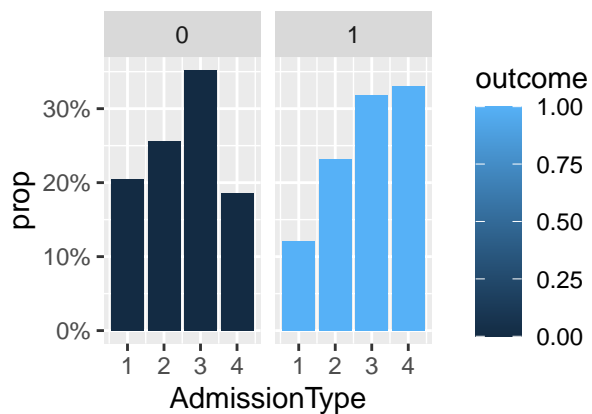
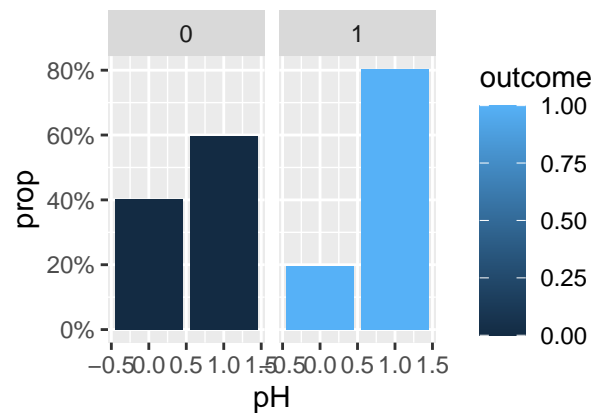
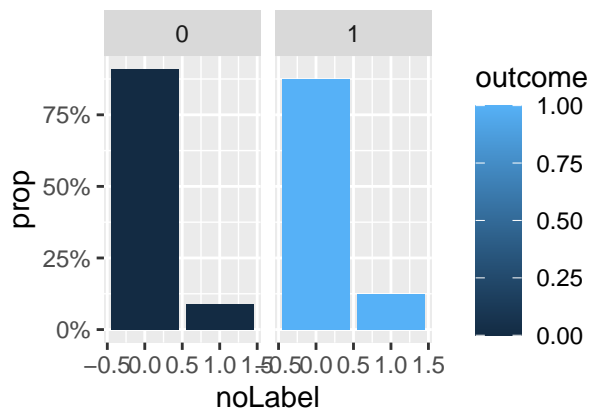












##		Negative	Positive	MeanDecreaseAccuracy	MeanDecreaseGini
##	ALP	-13.7652055	21.78300006	20.8715999	20.166268
##	ALT	-9.3021930	22.61850372	29.0182264	21.220909
##	AST	-7.1835069	19.08208476	21.5482755	19.243869
##	Albumin	-4.8349107	18.83180695	18.3656892	29.029853
##	BUN	-0.8608099	11.47664750	9.1728721	7.465904
##	Bilirubin	-2.6704801	20.59727039	25.6265386	24.478884
##	Cholesterol	16.6085037	1.73689223	13.3312495	26.438811
##	Creatinine	-3.5018215	9.16647785	5.6832481	5.711446
##	DiasABP	-5.8850458	13.12213899	14.7671532	17.476468
##	FiO2	30.2704414	-12.05411435	24.1241758	27.801845
##	GCS	2.9368735	-0.53658828	2.5881041	1.317848
##	Glucose	4.3523449	-1.00711650	2.2089831	10.226702
##	HCO3	-2.2394187	0.03480233	-1.3227458	9.406392
##	HCT	2.3607597	6.16070450	6.1388660	6.414929
##	HR	2.6652798	-2.38750998	0.6742073	1.341603
##	K	15.3013027	12.80878372	21.1785779	11.010979
##	Lactate	26.4824123	-8.94165719	21.1857443	46.503232
##	MAP	-23.4346198	25.02297707	21.7235968	18.472171
##	MechVent	-0.8328154	13.00670773	18.7973569	20.400354
##	Mg	13.9799204	17.38556653	22.5662006	16.523288
##	NIDiasABP	-11.0487100	14.37492396	12.9323493	8.807900
##	NIMAP	-9.9460953	15.21726231	14.3305942	9.111610
##	NISysABP	-12.6578721	16.13813789	14.3859707	8.155548
##	Na	11.8810097	0.41755057	9.1286719	8.919185
##	PaCO2	-4.7696521	22.51790788	28.7420877	30.133838
##	PaO2	4.6403791	18.92496045	31.5673903	37.957316

## Platelets	-0.6337255	2.20980082	1.1344530	7.981529
## RespRate	63.9838279	-22.34062929	40.1222887	46.300094
## SAPS	15.6791340	-8.88516346	7.8049901	7.876467
## SaO2	0.3580484	5.67507136	9.2089518	23.701003
## SysABP	-8.6892098	14.32715008	15.3104264	18.510982
## Temp	2.4844611	-0.50896386	2.3866390	1.270516
## TroponinI	1.9139476	1.45326512	2.2822644	13.369112
## TroponinT	4.3696116	1.39997800	4.1607186	29.448982
## Urine	4.1040591	-4.14790319	0.2181585	4.818855
## WBC	-2.8378474	3.54794195	0.4584263	10.103893
## noLabel	4.6784146	0.75422564	5.4492347	17.544236
## pH	9.3019743	6.06615499	22.6055766	30.806109
## [1]	0.3182887			

rf1

