

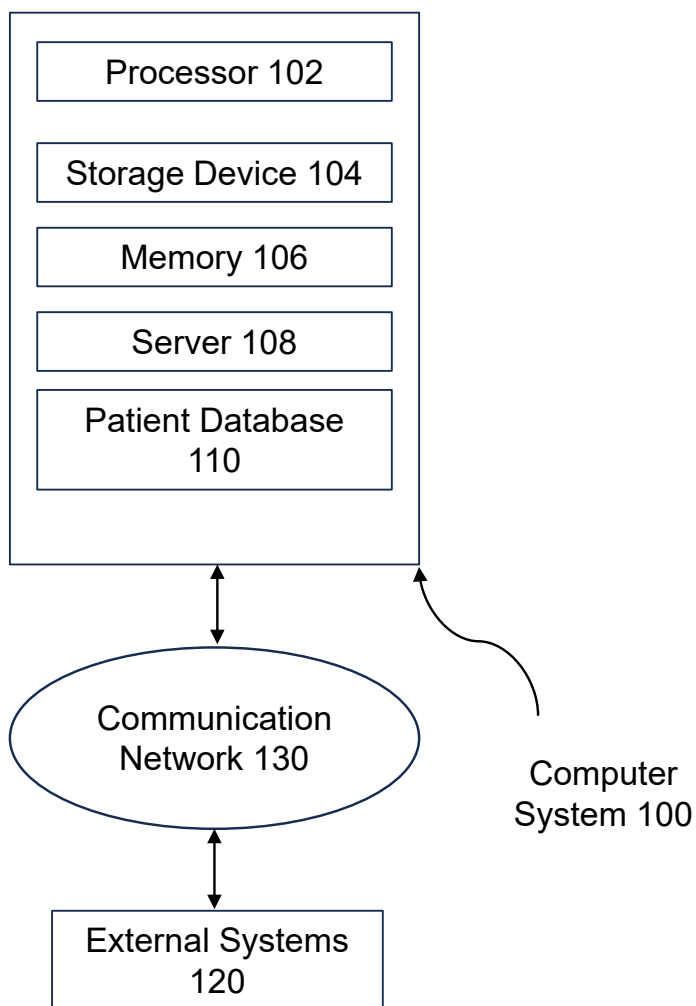


Figure 1A

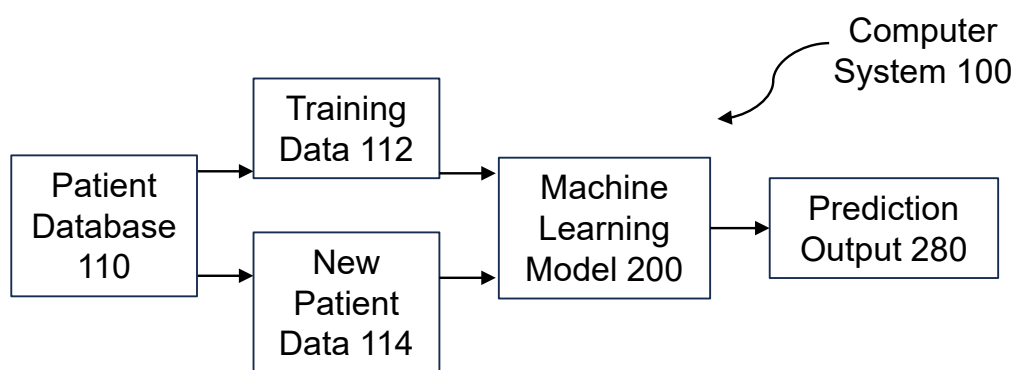


Figure 1B

Machine Learning
Model 200

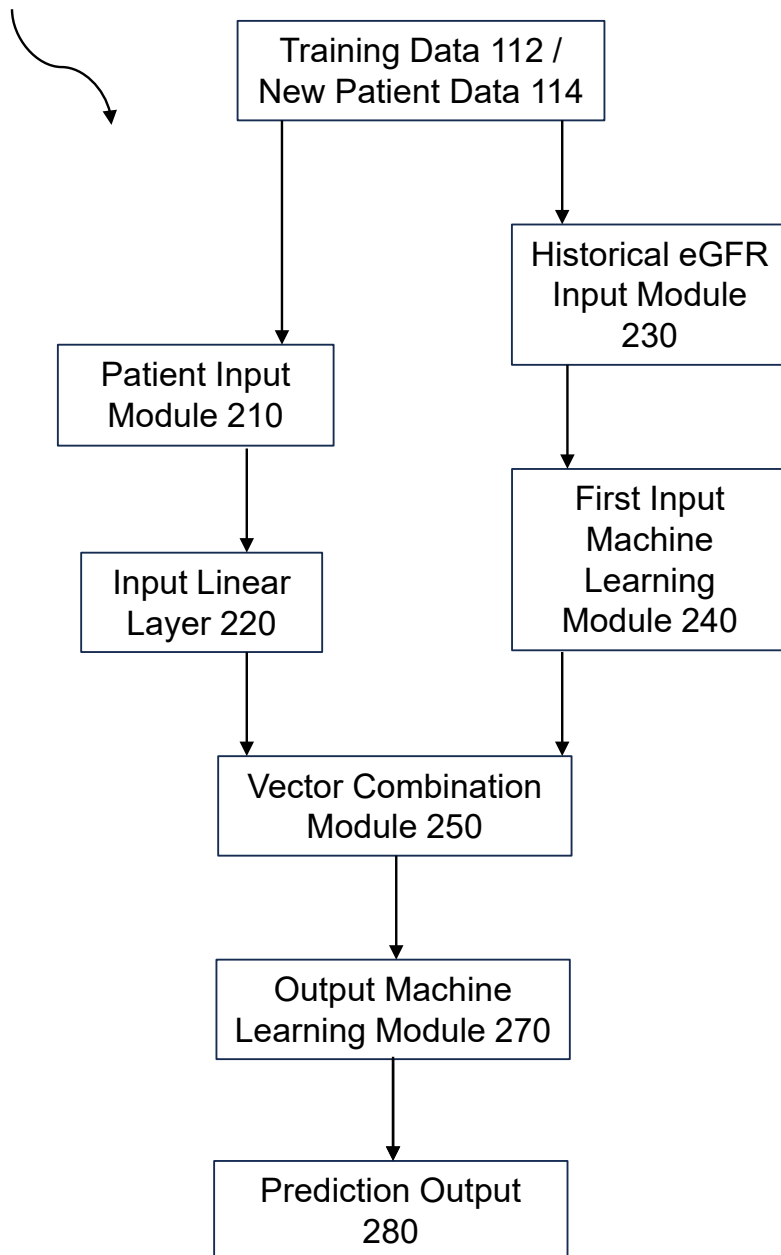


Figure 2A

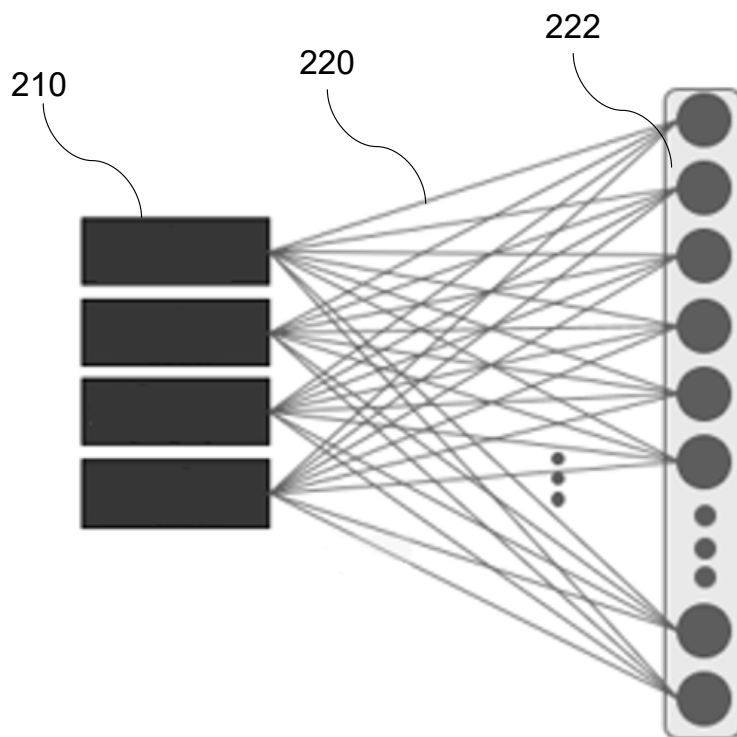


Figure 2B

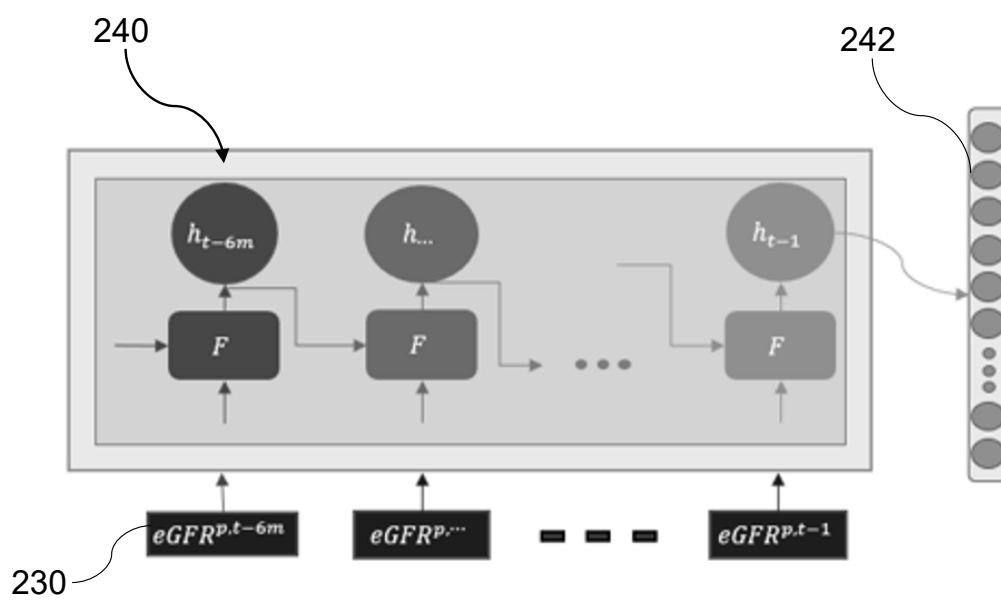


Figure 2C

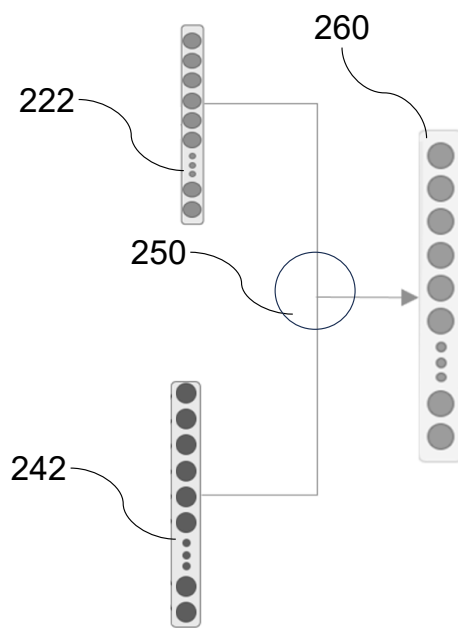


Figure 2D

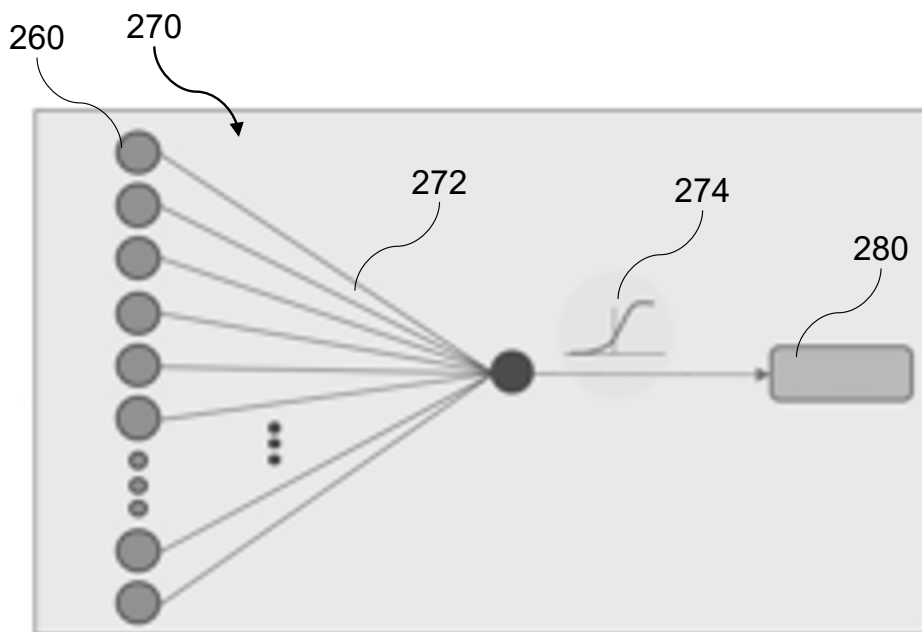


Figure 2E

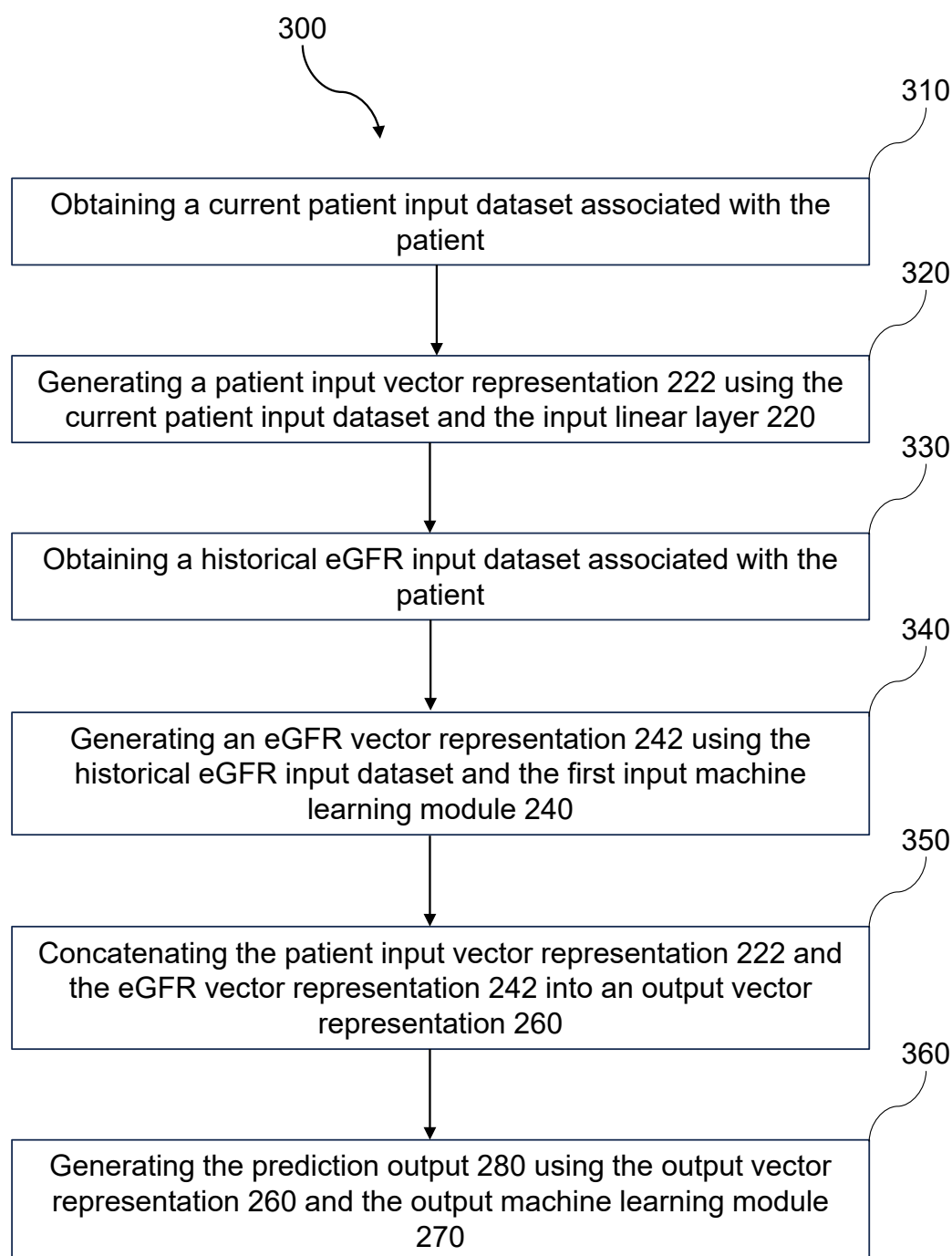


Figure 3

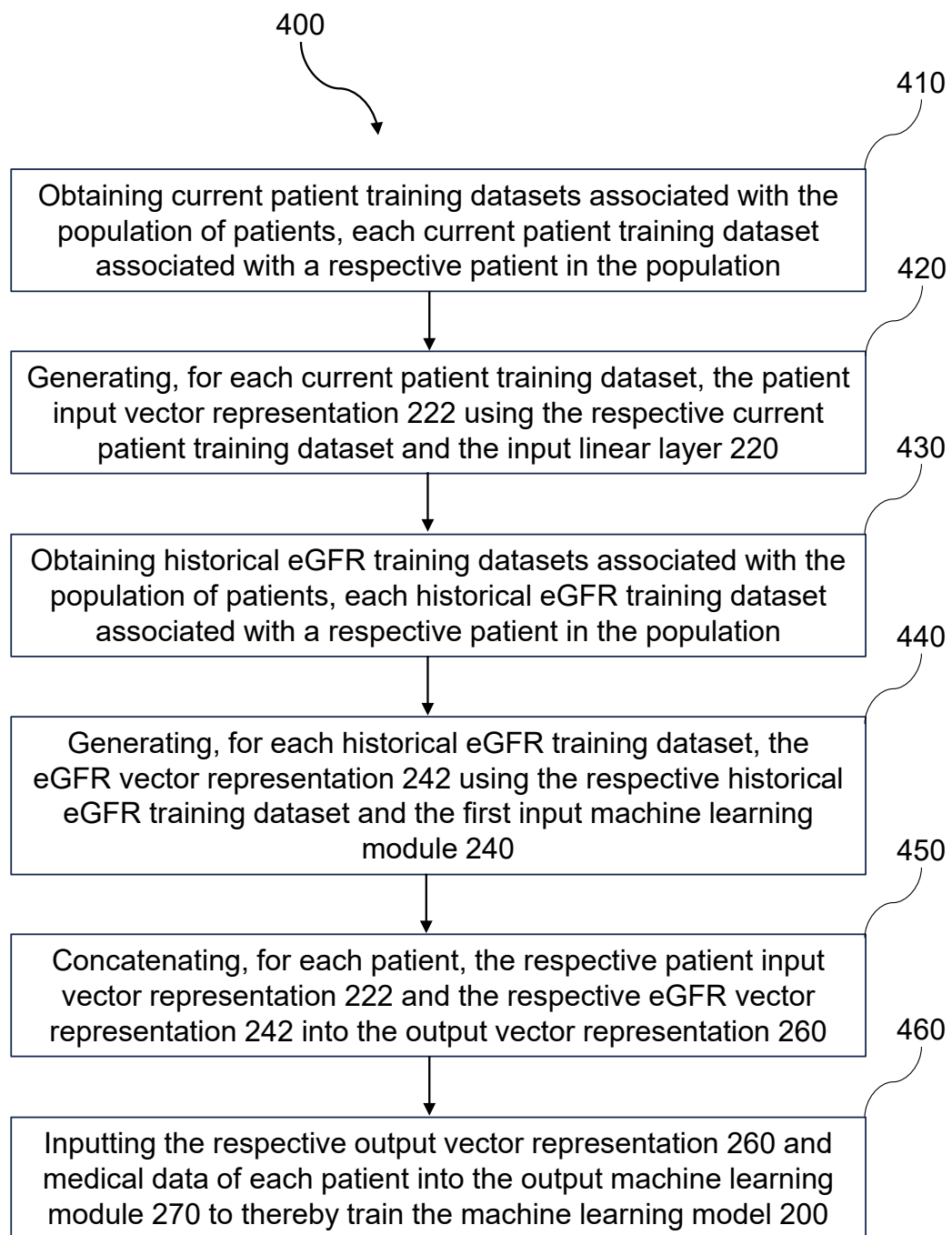


Figure 4

Data Variables	Values
Age at entry (years)	Median - 69.3 Interquartile range - 60.1 to 77.5
Male (%)	57.18 (5449 male patients)
Female (%)	42.82 (4080 female patients)
Diabetes (%)	52.49
Hypertension (%)	79.35
Baseline eGFR (mL/min/1.73m ²)	Median - 27 Interquartile range - 14.4 to 40.4
Baseline haemoglobin (g/dL)	Median - 10.9 Interquartile range - 9.4 to 12.6
Baseline fasting blood glucose (mg/dL)	Median - 109 Interquartile range - 96 to 137

Figure 5

RP Model	Time Period	AUC
Testing Dataset from First Major Hospital	1 year	0.79
	2 years	0.84
	5 years	0.86
Validation Dataset from First Major Hospital	1 year	0.76
	2 years	0.82
	5 years	0.82
Validation Dataset from Second Major Hospital	1 year	0.77
	2 years	0.77
	5 years	0.78

Figure 6A

IR Model	Time Period	AUC
Testing Dataset from First Major Hospital	1 year	0.96
	2 years	0.95
	5 years	0.95
Validation Dataset from First Major Hospital	1 year	0.95
	2 years	0.96
	5 years	0.96
Validation Dataset from Second Major Hospital	1 year	0.95
	2 years	0.95
	5 years	0.90

Figure 6B

RP Model	1-Year Predictions				2-Year Predictions				5-Year Predictions			
Risk Group	Low		High		Low		High		Low		High	
Population	First	Second	First	Second	First	Second	First	Second	First	Second	First	Second
Sensitivity	0.92	0.92	0.49	0.56	0.92	0.91	0.68	0.64	0.88	0.93	0.59	0.66
Specificity	0.39	0.27	0.90	0.91	0.41	0.28	0.87	0.83	0.54	0.22	0.94	0.78
PPV / NPV	0.93	0.89	0.66	0.73	0.92	0.81	0.71	0.73	0.79	0.10	0.92	0.99

Figure 7A

IR Model	1-Year Predictions				2-Year Predictions				5-Year Predictions			
Risk Group	Low		High		Low		High		Low		High	
Population	First	Second	First	Second	First	Second	First	Second	First	Second	First	Second
Sensitivity	1	1	0.70	0.59	0.99	0.98	0.79	0.70	0.99	0.98	0.79	0.75
Specificity	0.57	0.59	0.97	0.96	0.56	0.57	0.93	0.94	0.52	0.29	0.96	0.94
PPV / NPV	1	1	0.71	0.55	1	0.99	0.71	0.75	0.99	0.63	0.93	0.99

Figure 7B

290

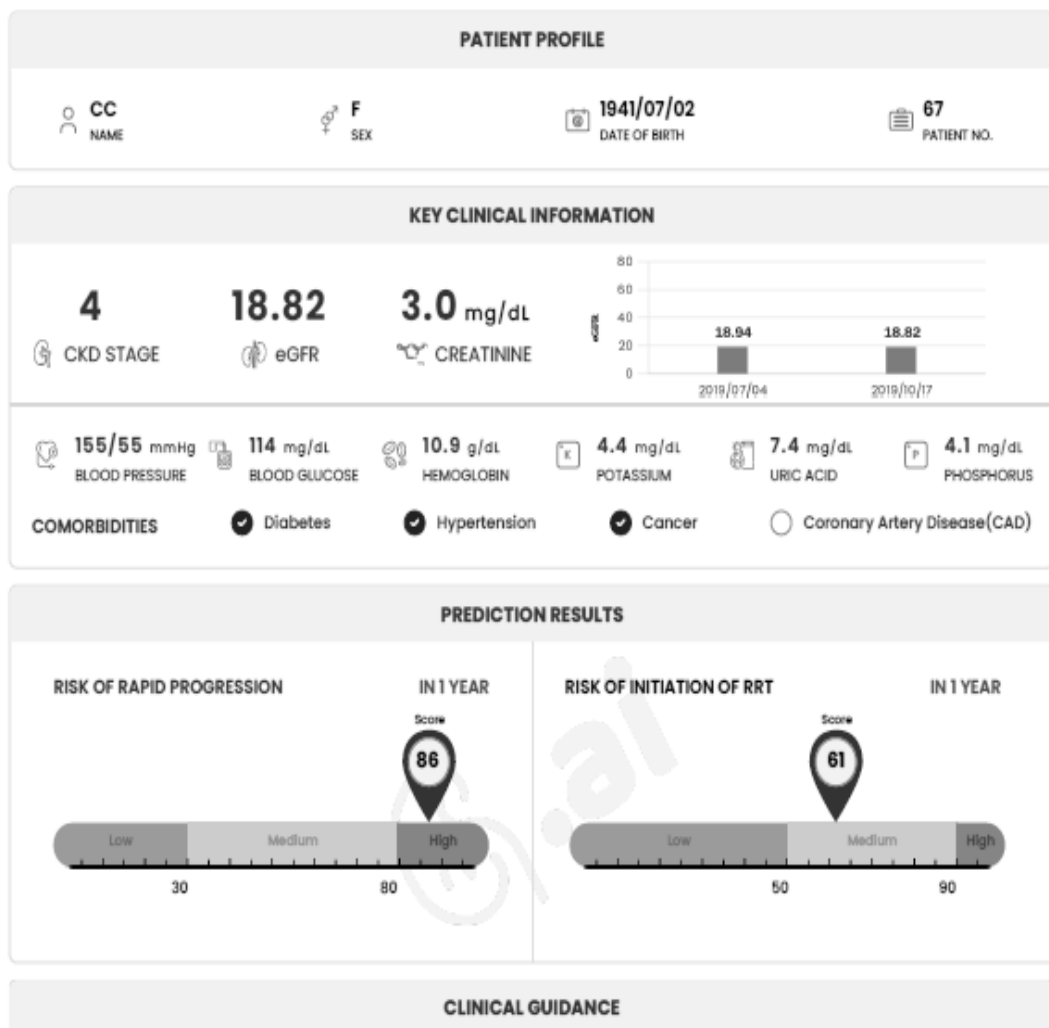


Figure 8A

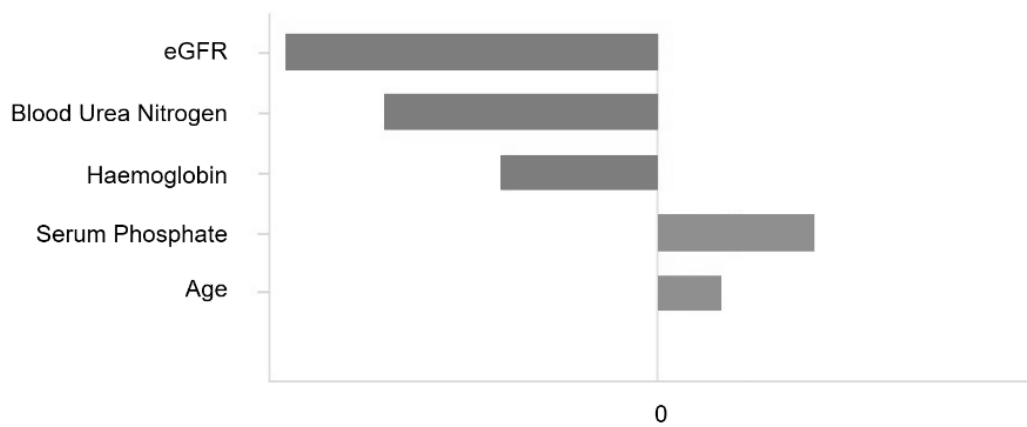


Figure 8B

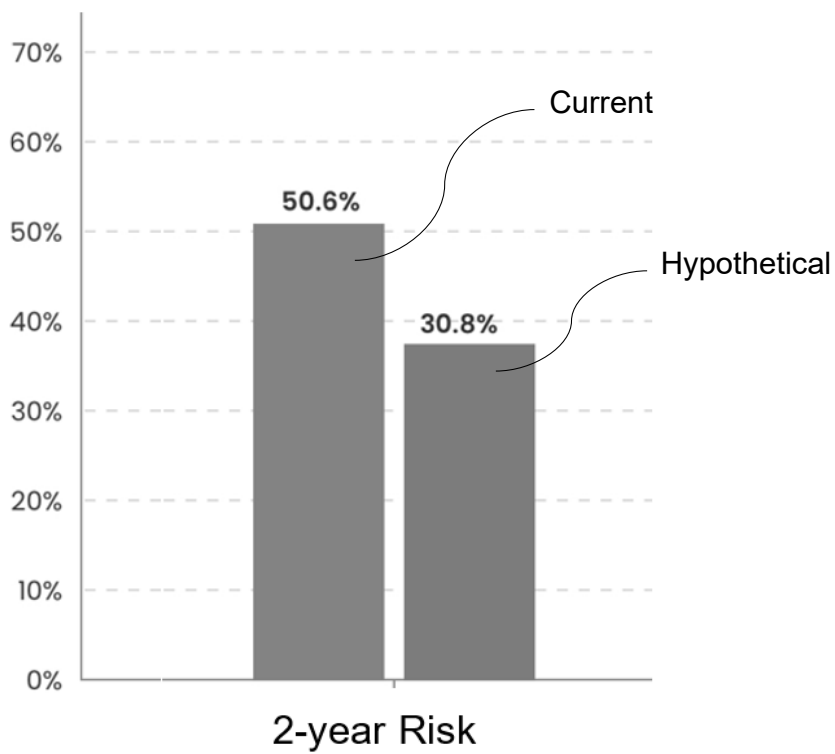


Figure 8C