

Univariate Results Tables

Cohort: Derivation
Outcome: Mortality
Predictor: Age (years)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 59.5	28	10	35.71	----	----	----	----	4.60	2.850		9.70e-02	8.77e-02	4.42e-02
[59.5,66.1)	28	12	42.86	1.744	7.497e-01	4.055	1.967e-01	1.95	8.378e-01				
[66.1,69.7)	28	13	46.43	1.149	5.030e-01	2.625	7.417e-01	4.86	2.075				
[69.7,73.9)	28	15	53.57	1.678	7.433e-01	3.786	2.129e-01	3.26	9.500e-01				
≥ 73.9	28	23	82.14	2.484	1.173	5.260	1.750e-02	2.30	1.144	3.031			
Quartiles													
< 61.2	35	13	37.14	----	----	----	----	4.60	1.947		7.94e-02	6.33e-02	1.77e-01
[61.2,68.5)	35	17	48.57	1.356	6.578e-01	2.794	4.094e-01	2.34	9.309e-01				
[68.5,73.3)	35	17	48.57	1.052	5.096e-01	2.170	8.919e-01	4.02	2.034				
≥ 73.3	35	26	74.29	2.108	1.076	4.129	2.967e-02	2.13	8.077e-01	3.031			
Tertiles													
< 64.7	47	18	38.30	----	----	----	----	4.60	1.947		3.46e-02	2.91e-02	5.66e-02
[64.7,71.3)	46	21	45.65	1.112	5.911e-01	2.091	7.421e-01	3.03	2.075				
≥ 71.3	47	34	72.34	1.978	1.102	3.548	2.219e-02	2.13	1.144	3.751			
Profile Likelihood													
<73.7	109	47	43.12	----	----	----	----	3.26	2.341	5.522	3.92e-03	2.11e-03	1.39e-02
≥73.7	31	26	83.87	2.107	1.296	3.428	2.666e-03	2.13	7.940e-01	2.853			
Quantitative													
	140	73	52.14	1.027	9.944e-01	1.061	1.051e-01				1.011e-01	1.043e-01	
Predictor: Gender													
Female	39	16	41.03	----	----	----	----	4.60	2.610				
Male	101	57	56.44	1.94	1.104	3.401	2.12E-02	2.34	1.140	3.26	1.49E-02	1.90E-02	

Cohort: Derivation
Outcome: Mortality
Predictor: Baseline (4-month) FVC % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 43.3	24	16	66.67	----	----	----	----	0.84	5.010e-01		1.48e-04	1.40e-05	3.90e-02
[43.3,56.6)	24	10	41.67	2.108e-01	8.660e-02	5.131e-01	6.026e-04	2.85	2.606				
[56.6,66)	24	10	41.67	3.014e-01	1.346e-01	6.750e-01	3.548e-03	3.03	8.405e-01				
[66,77)	24	13	54.17	4.060e-01	1.924e-01	8.570e-01	1.803e-02	2.08	1.596				
≥ 77	25	11	44.00	1.404e-01	6.018e-02	3.274e-01	5.535e-06	4.15	4.022				
Quartiles													
< 47.8	30	20	66.67	----	----	----	----	1.70	5.010e-01	2.341	2.16e-04	4.39e-05	8.81e-02
[47.8,61.1)	30	12	40.00	3.122e-01	1.476e-01	6.605e-01	2.329e-03	3.03	2.606				
[61.1,74)	29	15	51.72	4.904e-01	2.468e-01	9.744e-01	4.196e-02	2.08	1.396				
≥ 74	32	13	40.62	2.116e-01	1.031e-01	4.344e-01	2.311e-05	4.15	4.022				
Tertiles													
< 52.8	40	21	52.50	----	----	----	----	2.13	8.378e-01		1.96e-02	2.07e-02	3.04e-01
[52.8,69.9)	41	21	51.22	8.291e-01	4.393e-01	1.565	5.629e-01	2.85	1.396				
≥ 69.9	40	18	45.00	4.226e-01	2.207e-01	8.093e-01	9.366e-03	4.04	3.751				
Profile Likelihood													
< 43.6	25	17	68.00	----	----	----	----	0.84	3.587e-01	2.300	1.70e-05	3.29e-07	1.01e-02
≥ 43.6	96	43	44.79	2.339e-01	1.278e-01	4.281e-01	2.480e-06	3.75	2.853	4.860			
Quantitative	121	60	49.59	9.742e-01	9.600e-01	9.885e-01	4.463e-04				2.887e-04	4.093e-04	

Cohort: Derivation
Outcome: Mortality
Predictor: Baseline (4-month) DLco % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 28.9	22	13	59.09	----	----	----	----	0.95	8.378e-01		6.05e-04	2.34e-04	7.71e-01
[28.9,39)	22	13	59.09	4.569e-01	1.971e-01	1.059	6.788e-02	2.08	8.241e-01				
[39,49.4)	21	11	52.38	4.300e-01	1.907e-01	9.692e-01	4.181e-02	2.34	2.034				
[49.4,60)	22	9	40.91	2.910e-01	1.227e-01	6.901e-01	5.078e-03	3.75	2.850				
≥ 60	22	7	31.82	1.335e-01	5.081e-02	3.509e-01	4.418e-05	4.62	4.153				
Quartiles													
< 31.6	27	18	66.67	----	----	----	----	1.40	9.062e-01	3.031	7.49e-04	4.26e-04	9.81e-01
[31.6,43.8)	27	13	48.15	5.829e-01	2.773e-01	1.225	1.545e-01	2.61	8.405e-01				
[43.8,57)	26	13	50.00	4.183e-01	2.021e-01	8.659e-01	1.888e-02	3.26	2.130				
≥ 57	29	9	31.03	2.016e-01	8.941e-02	4.547e-01	1.135e-04	4.62	4.153				
Tertiles													
< 36.6	36	22	61.11	----	----	----	----	1.40	8.378e-01	2.932	7.60e-05	1.70e-05	4.76e-01
[36.6,53.4)	37	19	51.35	3.990e-01	2.116e-01	7.526e-01	4.536e-03	3.03	2.034				
≥ 53.4	36	12	33.33	2.125e-01	1.035e-01	4.361e-01	2.423e-05	4.62	4.153				
Profile Likelihood													
<37.8	39	24	61.54	----	----	----	----	0.95	8.241e-01	2.853	5.74e-06	4.01e-07	5.35e-02
≥37.8	70	29	41.43	2.573e-01	1.467e-01	4.514e-01	2.205e-06	4.04	3.261				
Quantitative	109	53	48.62	9.626e-01	9.453e-01	9.801e-01	3.529e-05				2.421e-05	2.375e-05	

Cohort: Derivation
Outcome: Mortality
Predictor: Baseline (4-month) CPI

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 43	22	6	27.27	----	----	----	----	5.52	4.616		1.01e-04	4.54e-05	5.98e-01
[43,50.8)	22	10	45.45	2.528	9.074e-01	7.041	7.605e-02	4.04	2.034				
[50.8,58.7)	21	12	57.14	2.793	1.026	7.606	4.444e-02	3.03	2.075				
[58.7,64.5)	22	11	50.00	6.641	2.343	1.883e+01	3.689e-04	1.70	9.309e-01				
≥ 64.5	22	14	63.64	7.513	2.837	1.989e+01	4.938e-05	1.71	3.313e-01				
Quartiles													
< 44.4	27	7	25.93	----	----	----	----	5.52	4.616		9.09e-05	3.87e-05	8.14e-01
[44.4,56)	27	14	51.85	2.652	1.061	6.628	3.691e-02	3.75	2.034				
[56,62.7)	27	16	59.26	3.476	1.403	8.614	7.121e-03	2.34	1.703				
≥ 62.7	28	16	57.14	7.247	2.931	1.792e+01	1.803e-05	0.91	3.313e-01				
Tertiles													
< 47.7	36	12	33.33	----	----	----	----	4.62	4.044		1.05e-04	4.06e-05	9.10e-01
[47.7,59.8)	37	21	56.76	2.215	1.073	4.573	3.159e-02	3.03	2.075				
≥ 59.8	36	20	55.56	4.883	2.326	1.025e+01	2.793e-05	1.40	8.378e-01	2.932			
Profile Likelihood													
<58.9	66	28	42.42	----	----	----	----	4.04	3.751		1.86e-05	3.28e-06	2.23e-01
≥58.9	43	25	58.14	3.621	2.039	6.433	1.134e-05	1.70	9.062e-01	2.853			
Quantitative	109	53	48.62	1.058	1.032	1.084	7.950e-06				4.080e-06	5.979e-06	

Cohort: Derivation
Outcome: Mortality
Predictor: Baseline (3-month) FVC % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 43.1	22	14	63.64	----	----	----	----	1.70	3.313e-01		4.37e-04	6.20e-05	3.73e-02
[43.1,56.5)	21	7	33.33	1.695e-01	5.888e-02	4.881e-01	1.005e-03	4.86	3.261				
[56.5,65.7)	22	9	40.91	3.038e-01	1.293e-01	7.138e-01	6.263e-03	0.00	8.405e-01				
[65.7,76.7)	21	11	52.38	4.186e-01	1.867e-01	9.387e-01	3.456e-02	2.85	1.947				
≥ 76.7	22	9	40.91	1.390e-01	5.467e-02	3.533e-01	3.392e-05	4.62	4.022				
Quartiles													
< 47.8	27	17	62.96	----	----	----	----	1.70	3.587e-01		4.27e-04	1.07e-04	6.36e-02
[47.8,60.5)	27	9	33.33	2.659e-01	1.126e-01	6.276e-01	2.505e-03	3.26	3.034				
[60.5,73.4)	27	14	51.85	5.032e-01	2.430e-01	1.042	6.449e-02	2.85	9.062e-01				
≥ 73.4	27	10	37.04	2.000e-01	8.946e-02	4.471e-01	8.810e-05	4.62	4.022				
Tertiles													
< 52.4	36	18	50.00	----	----	----	----	2.13	1.703		6.96e-02	6.71e-02	2.47e-01
[52.4,69.6)	36	16	44.44	7.440e-01	3.671e-01	1.508	4.120e-01	3.03	9.062e-01				
≥ 69.6	36	16	44.44	4.481e-01	2.233e-01	8.993e-01	2.390e-02	4.02	3.751				
Profile Likelihood													
< 43.6	23	15	65.22	----	----	----	----	1.70	3.313e-01		4.82e-05	1.50e-06	1.24e-02
≥ 43.6	85	35	41.18	2.287e-01	1.190e-01	4.394e-01	9.556e-06	4.02	3.034				
Quantitative													
	108	50	46.30	9.743e-01	9.589e-01	9.899e-01	1.330e-03				9.357e-04	1.254e-03	

Cohort: Derivation
Outcome: Mortality
Predictor: Baseline (3-month) DLco % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 28.6	19	12	63.16	----	----	----	----	0.95	9.062e-01		3.51e-04	5.43e-05	2.47e-01
[28.6,38)	18	9	50.00	5.867e-01	2.412e-01	1.427	2.397e-01	2.93	5.530e-01				
[38,49.9)	20	10	50.00	2.827e-01	1.158e-01	6.900e-01	5.523e-03	3.03	1.703				
[49.9,61)	19	7	36.84	2.488e-01	9.659e-02	6.409e-01	3.956e-03	3.75	1.947				
≥ 61	20	6	30.00	1.225e-01	4.408e-02	3.404e-01	5.666e-05	4.62	4.153				
Quartiles													
< 31.4	24	15	62.50	----	----	----	----	1.71	9.309e-01		1.00e-03	1.07e-03	7.62e-01
[31.4,41.3)	24	11	45.83	5.960e-01	2.630e-01	1.351	2.152e-01	2.93	6.407e-01				
[41.3,57.2)	24	12	50.00	5.069e-01	2.332e-01	1.102	8.625e-02	3.26	1.947				
≥ 57.2	24	6	25.00	1.659e-01	6.355e-02	4.329e-01	2.419e-04	4.62	4.153				
Tertiles													
< 34.5	32	19	59.38	----	----	----	----	1.71	9.062e-01	3.031	2.18e-04	6.79e-05	6.31e-01
[34.5,54.3)	32	15	46.88	4.156e-01	2.056e-01	8.397e-01	1.441e-02	3.03	1.947				
≥ 54.3	32	10	31.25	2.047e-01	9.362e-02	4.476e-01	7.078e-05	4.62	4.153				
Profile Likelihood													
<37.8	36	21	58.33	----	----	----	----	1.71	9.062e-01	3.031	1.92e-05	2.07e-06	8.72e-02
≥37.8	60	23	38.33	2.484e-01	1.339e-01	4.607e-01	9.940e-06	4.15	3.751				
Quantitative	96	44	45.83	9.614e-01	9.427e-01	9.804e-01	8.338e-05				5.229e-05	5.067e-05	

Cohort: Derivation
Outcome: Mortality
Predictor: Baseline (3-month) CPI

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 42.8	19	5	26.32	----	----	----	----	5.52	4.616		6.64e-04	2.65e-04	8.20e-01
[42.8,51.5)	19	8	42.11	2.402	7.735e-01	7.462	1.296e-01	4.15	2.034				
[51.5,59)	19	10	52.63	2.576	8.582e-01	7.731	9.156e-02	3.75	2.075				
[59,65.1)	19	8	42.11	5.744	1.784	1.850e+01	3.388e-03	1.70	9.309e-01				
≥ 65.1	20	13	65.00	7.665	2.676	2.196e+01	1.490e-04	1.71	2.300e-01				
Quartiles													
< 44.3	24	6	25.00	----	----	----	----	5.52	4.616		5.19e-04	3.58e-04	9.56e-01
[44.3,56.1)	24	11	45.83	2.690	9.831e-01	7.361	5.399e-02	3.75	2.034				
[56.1,62.8)	24	14	58.33	3.810	1.433	1.013e+01	7.326e-03	2.13	9.500e-01				
≥ 62.8	24	13	54.17	6.917	2.581	1.854e+01	1.206e-04	1.71	3.313e-01				
Tertiles													
< 47.6	32	10	31.25	----	----	----	----	4.62	4.153		7.36e-04	3.88e-04	8.65e-01
[47.6,59.9)	32	18	56.25	2.235	1.017	4.910	4.519e-02	3.03	2.034				
≥ 59.9	32	16	50.00	4.702	2.079	1.063e+01	2.004e-04	1.71	9.062e-01				
Profile Likelihood													
<58.9	57	23	40.35	----	----	----	----	4.15	3.751		9.49e-05	2.37e-05	3.70e-01
≥58.9	39	21	53.85	3.631	1.927	6.842	6.653e-05	1.71	9.062e-01	3.031			
Quantitative	96	44	45.83	1.059	1.031	1.088	2.703e-05				1.273e-05	1.834e-05	

Cohort: **Derivation**
 Outcome: **Mortality**
 Predictor: **MMP7 (ng / mL)**

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 2.7	27	12	44.44	----	----	----	----	2.61	1.703		3.74e-02	2.10e-02	4.80e-02
[2.7,3.76)	26	10	38.46	6.862e-01	2.954e-01	1.594	3.813e-01	4.04	3.031				
[3.76,4.99)	27	12	44.44	8.822e-01	3.928e-01	1.981	7.614e-01	4.15	1.112				
[4.99,6.41)	26	19	73.08	2.169	1.048	4.490	3.692e-02	1.60	5.284e-01	3.261			
≥ 6.41	27	15	55.56	1.179	5.493e-01	2.531	6.725e-01	2.61	9.500e-01				
Quartiles													
< 2.92	33	15	45.45	----	----	----	----	3.03	2.431		8.57e-03	6.10e-03	7.08e-03
[2.92,4.3)	33	11	33.33	7.759e-01	3.557e-01	1.693	5.237e-01	5.52	4.044				
[4.3,5.73)	33	22	66.67	2.397	1.231	4.670	1.017e-02	1.95	7.392e-01	3.261			
≥ 5.73	34	20	58.82	1.556	7.945e-01	3.048	1.974e-01	2.61	9.500e-01				
Tertiles													
< 3.51	44	18	40.91	----	----	----	----	4.04	2.606		8.68e-02	9.15e-02	5.46e-02
[3.51,5.35)	45	22	48.89	1.545	8.275e-01	2.885	1.721e-01	2.30	9.062e-01				
≥ 5.35	44	28	63.64	1.919	1.060	3.475	3.147e-02	2.13	9.500e-01	3.261			
Profile Likelihood													
< 4.3	66	26	39.39	----	----	----	----	4.62	2.664		2.23e-03	2.12e-03	5.27e-04
≥ 4.3	67	42	62.69	2.130	1.300	3.490	2.678e-03	2.03	9.309e-01	2.932			
Quantitative													
	133	68	51.13	1.035	0.9642	1.110	3.435e-01				3.548e-01	3.428e-01	

Cohort: Derivation
 Outcome: Mortality
 Predictor: ICAM1 (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 158	28	14	50.00	----	----	----	----	4.02	1.144		3.78e-02	4.49e-02	6.26e-02
[158,205)	28	9	32.14	5.455e-01	2.312e-01	1.287	1.664e-01	5.55	2.664				
[205,252)	28	16	57.14	1.844	8.953e-01	3.800	9.689e-02	1.60	7.940e-01				
[252,351)	28	14	50.00	1.519	7.195e-01	3.207	2.728e-01	2.13	9.500e-01				
≥ 351	28	20	71.43	1.169	5.748e-01	2.377	6.665e-01	2.85	8.405e-01	4.616			
Quartiles													
< 175	33	15	45.45	----	----	----	----	4.02	1.703		4.73e-01	4.84e-01	7.74e-01
[175,230)	37	17	45.95	1.290	6.392e-01	2.605	4.768e-01	2.61	9.309e-01				
[230,318)	35	15	42.86	1.481	7.210e-01	3.043	2.848e-01	2.61	1.087				
≥ 318	35	26	74.29	1.636	8.592e-01	3.114	1.342e-01	2.08	8.405e-01	4.085			
Tertiles													
< 197	47	19	40.43	----	----	----	----	4.02	2.431		4.07e-02	4.64e-02	8.19e-02
[197,274)	46	25	54.35	2.055	1.128	3.744	1.855e-02	2.34	9.309e-01				
≥ 274	47	29	61.70	1.758	9.813e-01	3.151	5.786e-02	2.85	1.087	4.085			
Profile Likelihood													
<202.5	53	20	37.74	----	----	----	----	4.04	2.664		1.14e-03	1.49e-03	8.61e-04
≥202.5	87	53	60.92	2.265	1.350	3.802	1.965e-03	2.08	9.500e-01	3.031			
Quantitative	140	73	52.14	1.001	9.995e-01	1.002	2.234e-01				2.367e-01	2.225e-01	

Cohort: **Derivation**
 Outcome: **Mortality**
 Predictor: **IL8 (ng / mL)**

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 0.0051	26	9	34.62	----	----	----	----	4.02	2.431		1.82e-02	1.03e-02	1.52e-03
[0.0051,0.00776)	30	13	43.33	3.281	1.450	7.424	4.351e-03	4.62	2.034				
[0.00776,0.00968)	28	17	60.71	1.053	4.479e-01	2.477	9.053e-01	2.61	9.062e-01				
[0.00968,0.013)	27	17	62.96	1.698	7.537e-01	3.826	2.014e-01	2.66	9.309e-01				
≥ 0.013	29	17	58.62	1.803	7.995e-01	4.066	1.554e-01	1.60	6.626e-01	2.853			
Quartiles													
< 0.0056	34	12	35.29	----	----	----	----	4.02	3.751		1.08e-02	8.67e-03	2.78e-03
[0.0056,0.0087)	33	17	51.52	2.908	1.465	5.773	2.273e-03	4.08	1.144				
[0.0087,0.011)	29	17	58.62	1.412	6.732e-01	2.963	3.611e-01	2.34	1.714				
≥ 0.011	44	27	61.36	1.900	9.066e-01	3.984	8.906e-02	1.60	8.350e-01	2.850			
Tertiles													
< 0.0066	43	17	39.53	----	----	----	----	4.02	3.261		1.82e-02	1.52e-02	7.92e-03
[0.0066,0.00997)	50	27	54.00	1.414	7.697e-01	2.598	2.642e-01	2.93	2.130	5.522			
≥ 0.00997	47	29	61.70	2.325	1.271	4.250	6.142e-03	1.70	8.378e-01	2.850			
Profile Likelihood													
< 0.0072	52	19	36.54	----	----	----	----	4.02	3.751		2.17e-03	2.88e-03	1.44e-03
≥ 0.0072	88	54	61.36	2.184	1.291	3.697	3.603e-03	2.13	1.087	2.853			
Quantitative*													
	140	73	52.14	1.002	0.9844	1.019	8.498e-01				8.528e-01	8.497e-01	

*Units of pg / mL were used in **Quantitative model only**.

Cohort: Derivation
 Outcome: Mortality
 Predictor: VCAM1 (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 335	27	7	25.93	----	----	----	----	4.60	2.431		2.87e-02	2.66e-02	6.94e-01
[335,402)	28	14	50.00	1.448	5.821e-01	3.601	4.260e-01	4.04	2.341				
[402,457)	29	15	51.72	1.993	8.103e-01	4.900	1.331e-01	4.02	7.502e-01				
[457,572)	28	16	57.14	2.344	9.601e-01	5.724	6.139e-02	1.71	8.241e-01				
≥ 572	28	21	75.00	3.327	1.412	7.841	5.997e-03	2.13	8.378e-01	3.031			
Quartiles													
< 359	35	11	31.43	----	----	----	----	4.60	2.664		3.74e-03	3.59e-03	1.84e-01
[359,419)	33	16	48.48	1.275	5.907e-01	2.750	5.362e-01	4.08	2.341				
[419,518)	37	22	59.46	2.538	1.228	5.242	1.188e-02	1.60	7.502e-01				
≥ 518	35	24	68.57	2.873	1.401	5.891	3.962e-03	2.13	8.350e-01	3.031			
Tertiles													
< 378	47	16	34.04	----	----	----	----	4.15	2.431		2.65e-02	3.13e-02	4.70e-01
[378,480)	46	25	54.35	1.746	9.313e-01	3.275	8.219e-02	3.26	1.112				
≥ 480	47	32	68.09	2.204	1.208	4.020	9.952e-03	2.13	9.500e-01	2.932			
Profile Likelihood													
< 418.0	68	27	39.71	----	----	----	----	4.08	2.664		3.28e-04	3.01e-04	3.18e-02
≥ 418.0	72	46	63.89	2.357	1.461	3.803	4.438e-04	1.71	8.378e-01	2.853			
Quantitative	140	73	52.14	1.002	1.001	1.003	9.835e-04				2.684e-03	8.873e-04	

Cohort: Derivation
 Outcome: Mortality
 Predictor: S100A12 (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 15	27	10	37.04	----	----	----	----	4.15	4.085		1.49e-02	1.30e-02	5.59e-02
[15,21.6)	29	15	51.72	1.892	8.442e-01	4.242	1.214e-01	2.13	1.112				
[21.6,29)	27	12	44.44	1.386	5.963e-01	3.221	4.482e-01	4.04	2.431				
[29,51)	28	16	57.14	3.363	1.501	7.539	3.225e-03	0.79	6.626e-01				
≥ 51	29	20	68.97	2.609	1.215	5.601	1.387e-02	2.61	8.378e-01	4.022			
Quartiles													
< 17.8	35	14	40.00	----	----	----	----	4.15	2.341		2.63e-02	2.95e-02	1.08e-01
[17.8,25)	34	16	47.06	1.575	7.611e-01	3.258	2.210e-01	3.03	2.075				
[25,45.2)	36	20	55.56	2.224	1.113	4.444	2.364e-02	1.14	7.502e-01				
≥ 45.2	35	23	65.71	2.530	1.298	4.931	6.428e-03	2.13	8.378e-01	4.022			
Tertiles													
< 19	40	16	40.00	----	----	----	----	4.15	2.130		1.25e-02	1.22e-02	6.10e-02
[19,37)	52	27	51.92	1.620	8.664e-01	3.028	1.309e-01	3.03	2.075				
≥ 37	48	30	62.50	2.447	1.329	4.504	4.048e-03	1.40	7.940e-01	2.932			
Profile Likelihood													
< 26.5	77	34	44.16	----	----	----	----	4.04	2.341		1.65e-03	1.27e-03	9.44e-03
≥ 26.5	63	39	61.90	2.107	1.326	3.347	1.599e-03	1.40	8.077e-01	2.932			
Quantitative	140	73	52.14	1.004	1.000	1.009	4.422e-02				7.491e-02	4.214e-02	

Cohort: Derivation
Outcome: Transplant Free Survival
Predictor: Age (years)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 59.5	28	18	64.29	----	----	----	----	2.41	6.188e-01		4.19e-01	3.99e-01	1.25e-01
[59.5,66.1)	28	21	75.00	1.669	8.859e-01	3.145	1.130e-01	0.84	4.079e-01	2.127			
[66.1,69.7)	28	20	71.43	9.955e-01	5.260e-01	1.884	9.889e-01	2.35	1.112				
[69.7,73.9)	28	20	71.43	1.175	6.163e-01	2.241	6.237e-01	1.71	8.350e-01				
≥ 73.9	28	24	85.71	1.402	7.568e-01	2.597	2.828e-01	2.13	8.077e-01	3.031			
Quartiles													
< 61.2	35	22	62.86	----	----	----	----	1.67	6.188e-01		4.09e-01	4.11e-01	1.58e-01
[61.2,68.5)	35	28	80.00	1.325	7.574e-01	2.319	3.239e-01	1.11	7.064e-01	2.932			
[68.5,73.3)	35	25	71.43	9.073e-01	5.108e-01	1.612	7.400e-01	2.43	1.703	5.522			
≥ 73.3	35	28	80.00	1.315	7.490e-01	2.310	3.400e-01	1.60	7.940e-01	2.853			
Tertiles													
< 64.7	47	31	65.96	----	----	----	----	1.67	7.502e-01	5.552	7.52e-01	7.50e-01	2.20e-01
[64.7,71.3)	46	35	76.09	1.068	6.576e-01	1.735	7.901e-01	2.34	9.500e-01	3.003			
≥ 71.3	47	37	78.72	1.201	7.396e-01	1.950	4.591e-01	1.70	8.241e-01	2.853			
Profile Likelihood													
<73.7	109	76	69.72	----	----	----	----	1.95	9.500e-01	2.850	2.17e-01	2.05e-01	1.04e-01
≥73.7	31	27	87.10	1.331	8.540e-01	2.073	2.067e-01	1.60	7.392e-01	2.853			
Quantitative													
	140	103	73.57	1.001	9.749e-01	1.028	9.386e-01				9.386e-01	9.386e-01	
Predictor: Gender													
Female	39	22	56.41	----	----	----	----	2.95	2.127				
Male	101	81	80.20	1.94	1.206	3.131	6.36E-03	1.14	0.808	2.13	3.88E-03	5.48E-03	

Cohort: Derivation
Outcome: Transplant Free Survival
Predictor: Baseline (4-month) FVC % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 43.3	24	23	95.83	----	----	----	----	0.50	1.533e-01	1.703	1.24e-06	1.53e-07	1.22e-01
[43.3,56.6)	24	20	83.33	3.508e-01	1.827e-01	6.734e-01	1.642e-03	1.32	5.832e-01	3.261			
[56.6,66)	24	15	62.50	3.122e-01	1.604e-01	6.079e-01	6.166e-04	2.09	8.405e-01				
[66,77)	24	18	75.00	3.999e-01	2.130e-01	7.509e-01	4.353e-03	1.95	1.396	3.031			
≥ 77	25	13	52.00	1.286e-01	6.190e-02	2.671e-01	3.812e-08	4.15	4.022				
Quartiles													
< 47.8	30	29	96.67	----	----	----	----	0.54	2.300e-01	1.703	2.78e-06	5.55e-07	2.89e-01
[47.8,61.1)	30	22	73.33	4.094e-01	2.307e-01	7.263e-01	2.265e-03	1.90	7.392e-01	3.261			
[61.1,74)	29	21	72.41	4.597e-01	2.587e-01	8.170e-01	8.075e-03	2.03	9.062e-01	3.751			
≥ 74	32	17	53.12	1.929e-01	1.039e-01	3.582e-01	1.865e-07	4.04	2.971				
Tertiles													
< 52.8	40	36	90.00	----	----	----	----	0.58	3.313e-01	1.714	5.19e-05	4.42e-05	7.68e-01
[52.8,69.9)	41	30	73.17	6.461e-01	3.910e-01	1.068	8.829e-02	1.60	8.405e-01	2.853			
≥ 69.9	40	23	57.50	3.072e-01	1.795e-01	5.259e-01	1.687e-05	4.02	2.949				
Profile Likelihood													
< 45.0	26	25	96.15	----	----	----	----	0.36	1.533e-01	1.703	1.09e-06	1.33e-08	4.66e-02
≥ 45.0	95	64	67.37	2.603e-01	1.583e-01	4.283e-01	1.162e-07	2.43	1.673	3.261			
Quantitative													
	121	89	73.55	9.695e-01	9.577e-01	9.815e-01	7.600e-07				2.664e-07	6.155e-07	

Cohort: Derivation
Outcome: Transplant Free Survival
Predictor: Baseline (4-month) DLco % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 28.9	22	19	86.36	----	----	----	----	0.58	1.697e-01	2.127	6.03e-06	2.45e-06	6.32e-01
[28.9,39)	22	19	86.36	5.025e-01	2.538e-01	9.952e-01	4.840e-02	1.09	3.313e-01	2.932			
[39,49.4)	21	16	76.19	4.330e-01	2.209e-01	8.490e-01	1.483e-02	2.03	1.295	3.034			
[49.4,60)	22	14	63.64	3.151e-01	1.563e-01	6.356e-01	1.254e-03	2.85	1.947				
≥ 60	22	9	40.91	1.254e-01	5.480e-02	2.871e-01	8.960e-07	4.62	4.153				
Quartiles													
< 31.6	27	24	88.89	----	----	----	----	0.91	5.777e-01	2.127	9.36e-06	7.96e-06	7.90e-01
[31.6,43.8)	27	23	85.19	7.944e-01	4.413e-01	1.430	4.429e-01	0.84	5.010e-01	2.092			
[43.8,57)	26	18	69.23	4.267e-01	2.293e-01	7.938e-01	7.163e-03	2.85	2.130				
≥ 57	29	12	41.38	2.047e-01	1.012e-01	4.141e-01	1.019e-05	4.62	4.153				
Tertiles													
< 36.6	36	32	88.89	----	----	----	----	0.58	2.546e-01	1.714	1.02e-06	1.47e-07	4.86e-01
[36.6,53.4)	37	28	75.68	4.105e-01	2.435e-01	6.919e-01	8.289e-04	2.09	1.673	3.034			
≥ 53.4	36	17	47.22	2.092e-01	1.144e-01	3.826e-01	3.793e-07	4.15	3.261				
Profile Likelihood													
<38.0	40	35	87.50	----	----	----	----	0.58	2.930e-01	1.396	2.18e-07	1.06e-08	8.42e-02
≥38.0	69	42	60.87	2.771e-01	1.737e-01	4.423e-01	7.382e-08	3.00	2.341	4.153			
Quantitative	109	77	70.64	9.618e-01	9.475e-01	9.763e-01	3.559e-07				1.944e-07	1.965e-07	

Cohort: Derivation
Outcome: Transplant Free Survival
Predictor: Baseline (4-month) CPI

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 43	22	8	36.36	----	----	----	----	5.20	4.616		4.39e-08	1.05e-08	1.25e-01
[43,50.8)	22	13	59.09	2.447	1.001	5.984	4.983e-02	3.26	2.034				
[50.8,58.7)	21	17	80.95	3.039	1.294	7.136	1.074e-02	2.34	1.295				
[58.7,64.5)	22	20	90.91	8.813	3.719	2.088e+01	7.637e-07	0.93	5.010e-01	1.900			
≥ 64.5	22	19	86.36	7.894	3.385	1.841e+01	1.725e-06	0.58	1.697e-01	2.853			
Quartiles													
< 44.4	27	9	33.33	----	----	----	----	4.62	4.616		5.77e-08	9.87e-09	3.24e-01
[44.4,56)	27	20	74.07	2.901	1.310	6.427	8.674e-03	2.85	1.947				
[56,62.7)	27	23	85.19	3.904	1.784	8.542	6.506e-04	1.70	1.295	2.606			
≥ 62.7	28	25	89.29	8.847	4.055	1.930e+01	4.315e-08	0.33	1.478e-01	1.714			
Tertiles													
< 47.7	36	15	41.67	----	----	----	----	4.15	4.044		1.07e-08	9.58e-10	1.25e-01
[47.7,59.8)	37	29	78.38	2.434	1.292	4.585	5.903e-03	2.34	1.703	3.034			
≥ 59.8	36	33	91.67	6.475	3.429	1.223e+01	8.496e-09	0.58	2.546e-01	1.320			
Profile Likelihood													
<58.9	66	38	57.58	----	----	----	----	3.75	2.434	4.616	1.25e-08	5.81e-10	4.20e-02
≥58.9	43	39	90.70	4.106	2.544	6.628	7.361e-09	0.74	4.079e-01	1.703			
Quantitative	109	77	70.64	1.060	1.039	1.082	2.445e-08				8.193e-09	1.591e-08	

Cohort: Derivation
Outcome: Transplant Free Survival
Predictor: Baseline (3-month) FVC % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 43.1	22	21	95.45	----	----	----	----	0.28	1.478e-01	1.714	7.42e-06	1.03e-06	2.51e-01
[43.1,56.5)	21	17	80.95	3.582e-01	1.774e-01	7.235e-01	4.203e-03	0.70	4.873e-01				
[56.5,65.7)	22	14	63.64	3.079e-01	1.540e-01	6.157e-01	8.641e-04	2.09	8.405e-01				
[65.7,76.7)	21	15	71.43	3.834e-01	1.947e-01	7.552e-01	5.571e-03	2.08	1.596				
≥ 76.7	22	11	50.00	1.293e-01	5.922e-02	2.821e-01	2.786e-07	4.15	4.022				
Quartiles													
< 47.8	27	26	96.30	----	----	----	----	0.36	1.697e-01	1.703	3.78e-06	8.70e-07	2.37e-01
[47.8,60.5)	27	19	70.37	3.863e-01	2.087e-01	7.149e-01	2.459e-03	1.90	7.009e-01				
[60.5,73.4)	27	20	74.07	4.490e-01	2.468e-01	8.170e-01	8.747e-03	2.03	8.077e-01	3.751			
≥ 73.4	27	13	48.15	1.695e-01	8.524e-02	3.372e-01	4.210e-07	4.15	2.971				
Tertiles													
< 52.4	36	32	88.89	----	----	----	----	0.50	2.300e-01	1.703	1.48e-04	1.23e-04	6.78e-01
[52.4,69.6)	36	26	72.22	6.310e-01	3.689e-01	1.080	9.282e-02	1.90	8.405e-01	3.034			
≥ 69.6	36	20	55.56	3.032e-01	1.709e-01	5.382e-01	4.566e-05	4.02	2.949				
Profile Likelihood													
< 45.2	24	23	95.83	----	----	----	----	0.36	1.533e-01	1.703	2.85e-06	5.46e-08	7.22e-02
≥ 45.2	84	55	65.48	2.571e-01	1.520e-01	4.349e-01	4.078e-07	2.85	1.900	3.880			
Quantitative	108	78	72.22	9.685e-01	9.559e-01	9.813e-01	1.731e-06				6.459e-07	1.466e-06	

Cohort: Derivation
Outcome: Transplant Free Survival
Predictor: Baseline (3-month) DLco % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 28.6	19	17	89.47	----	----	----	----	0.58	9.030e-02	2.127	2.37e-06	4.37e-07	1.50e-01
[28.6,38)	18	15	83.33	7.304e-01	3.599e-01	1.483	3.845e-01	0.55	2.546e-01	3.031			
[38,49.9)	20	15	75.00	3.169e-01	1.528e-01	6.574e-01	2.025e-03	1.90	1.295				
[49.9,61)	19	12	63.16	3.037e-01	1.435e-01	6.427e-01	1.835e-03	2.43	1.596				
≥ 61	20	8	40.00	1.198e-01	4.999e-02	2.869e-01	1.926e-06	4.62	4.153				
Quartiles													
< 31.4	24	21	87.50	----	----	----	----	0.91	2.300e-01	2.853	1.86e-05	2.85e-05	6.41e-01
[31.4,41.3)	24	20	83.33	8.027e-01	4.262e-01	1.512	4.964e-01	0.74	4.079e-01	2.092			
[41.3,57.2)	24	17	70.83	4.945e-01	2.584e-01	9.464e-01	3.347e-02	2.41	1.703				
≥ 57.2	24	9	37.50	1.791e-01	8.110e-02	3.957e-01	2.106e-05	4.62	4.153				
Tertiles													
< 34.5	32	28	87.50	----	----	----	----	0.58	2.546e-01	2.075	2.34e-06	8.67e-07	5.87e-01
[34.5,54.3)	32	25	78.12	4.798e-01	2.753e-01	8.363e-01	9.577e-03	1.95	1.295	2.949			
≥ 54.3	32	14	43.75	1.949e-01	1.011e-01	3.760e-01	1.068e-06	4.15	3.880				
Profile Likelihood													
<38.0	37	32	86.49	----	----	----	----	0.55	2.300e-01	2.075	6.69e-07	5.02e-08	1.22e-01
≥38.0	59	35	59.32	2.702e-01	1.637e-01	4.460e-01	3.103e-07	3.26	2.130	5.522			
Quantitative	96	67	69.79	9.610e-01	9.458e-01	9.764e-01	9.150e-07				4.407e-07	4.316e-07	

Cohort: Derivation
Outcome: Transplant Free Survival
Predictor: Baseline (3-month) CPI

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 42.8	19	7	36.84	----	----	----	----	5.20	4.616		2.71e-07	5.04e-08	1.14e-01
[42.8,51.5)	19	11	57.89	2.371	9.023e-01	6.230	7.986e-02	3.26	1.947				
[51.5,59)	19	14	73.68	2.679	1.064	6.744	3.649e-02	2.41	1.295				
[59,65.1)	19	18	94.74	9.353	3.711	2.357e+01	2.134e-06	0.69	4.079e-01	1.900			
≥ 65.1	20	17	85.00	7.563	3.058	1.871e+01	1.191e-05	0.33	8.760e-02	2.932			
Quartiles													
< 44.3	24	8	33.33	----	----	----	----	5.20	4.616		6.47e-07	3.00e-07	7.11e-01
[44.3,56.1)	24	17	70.83	3.051	1.303	7.143	1.018e-02	2.43	1.596				
[56.1,62.8)	24	21	87.50	4.336	1.896	9.915	5.086e-04	1.29	8.405e-01	2.130			
≥ 62.8	24	21	87.50	8.512	3.701	1.958e+01	4.666e-07	0.28	1.396e-01	2.127			
Tertiles													
< 47.6	32	13	40.62	----	----	----	----	4.62	4.153		5.45e-08	4.65e-09	2.06e-01
[47.6,59.9)	32	25	78.12	2.400	1.217	4.730	1.146e-02	2.13	1.703	3.751			
≥ 59.9	32	29	90.62	6.717	3.403	1.326e+01	4.051e-08	0.41	2.300e-01	1.320			
Profile Likelihood													
<58.9	57	32	56.14	----	----	----	----	3.75	2.949	5.522	3.43e-08	2.04e-09	5.09e-02
≥58.9	39	35	89.74	4.347	2.592	7.292	2.572e-08	0.58	2.930e-01	1.703			
Quantitative	96	67	69.79	1.062	1.039	1.085	8.946e-08				2.462e-08	4.772e-08	

Cohort: Derivation
Outcome: Transplant Free Survival
Predictor: MMP7 (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 2.7	27	18	66.67	----	----	----	----	1.70	1.144		1.81e-01	1.42e-01	1.88e-01
[2.7,3.76)	26	17	65.38	7.890e-01	4.056e-01	1.535	4.851e-01	2.97	1.714				
[3.76,4.99)	27	20	74.07	1.009	5.305e-01	1.917	9.792e-01	1.11	6.188e-01				
[4.99,6.41)	26	23	88.46	1.720	9.253e-01	3.196	8.645e-02	0.84	5.010e-01	2.853			
≥ 6.41	27	19	70.37	1.025	5.365e-01	1.958	9.403e-01	1.71	8.378e-01				
Quartiles													
< 2.92	33	22	66.67	----	----	----	----	2.43	1.673		9.31e-02	7.69e-02	4.72e-02
[2.92,4.3)	33	22	66.67	1.041	5.757e-01	1.882	8.946e-01	2.41	8.597e-01				
[4.3,5.73)	33	27	81.82	1.928	1.091	3.409	2.385e-02	0.81	5.284e-01	2.300			
≥ 5.73	34	26	76.47	1.375	7.780e-01	2.432	2.728e-01	1.60	8.405e-01	2.949			
Tertiles													
< 3.51	44	30	68.18	----	----	----	----	2.43	1.673	4.616	3.13e-01	3.23e-01	2.31e-01
[3.51,5.35)	45	33	73.33	1.381	8.413e-01	2.267	2.017e-01	0.91	6.160e-01	2.853			
≥ 5.35	44	34	77.27	1.398	8.543e-01	2.287	1.824e-01	1.60	8.405e-01	2.932			
Profile Likelihood													
< 4.2	63	41	65.08	----	----	----	----	2.43	1.703	4.044	1.14e-02	1.11e-02	1.51e-03
≥ 4.2	70	56	80.00	1.685	1.121	2.532	1.208e-02	1.09	8.241e-01	2.130			
Quantitative	133	97	72.93	1.015	0.9538	1.080	6.377e-01				6.412e-01	6.376e-01	

Cohort: Derivation
Outcome: Transplant Free Survival
Predictor: ICAM1 (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 158	28	16	57.14	----	----	----	----	3.88	1.144		7.36e-03	6.01e-03	9.57e-03
[158,205)	28	16	57.14	8.857e-01	4.364e-01	1.798	7.368e-01	2.43	1.320				
[205,252)	28	23	82.14	2.307	1.213	4.386	1.076e-02	0.81	5.832e-01	2.949			
[252,351)	28	23	82.14	2.180	1.145	4.149	1.767e-02	0.95	6.407e-01	2.606			
≥ 351	28	25	89.29	1.356	7.123e-01	2.582	3.536e-01	1.95	8.378e-01	4.085			
Quartiles													
< 175	33	20	60.61	----	----	----	----	2.43	1.396		1.67e-01	1.77e-01	2.20e-01
[175,230)	37	25	67.57	1.446	7.983e-01	2.618	2.239e-01	0.93	7.392e-01	2.949			
[230,318)	35	26	74.29	1.913	1.064	3.441	3.021e-02	1.09	8.077e-01	2.971			
≥ 318	35	32	91.43	1.555	8.845e-01	2.735	1.251e-01	1.95	8.350e-01	2.932			
Tertiles													
< 197	47	27	57.45	----	----	----	----	2.66	1.703		1.17e-02	1.44e-02	8.61e-03
[197,274)	46	35	76.09	2.014	1.216	3.337	6.536e-03	0.86	7.009e-01	2.606			
≥ 274	47	41	87.23	1.787	1.096	2.914	2.001e-02	1.71	8.378e-01	2.850			
Profile Likelihood													
<202.5	53	29	54.72	----	----	----	----	3.88	1.703		2.13e-04	2.92e-04	2.13e-05
≥202.5	87	74	85.06	2.182	1.416	3.362	4.039e-04	0.93	7.940e-01	2.092			
Quantitative	140	103	73.57	1.001	9.993e-01	1.002	3.745e-01				3.836e-01	3.741e-01	

Cohort: Derivation
Outcome: Transplant Free Survival
Predictor: IL8 (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 0.0051	26	17	65.38	----	----	----	----	2.97	1.112		1.78e-03	9.40e-04	2.91e-05
[0.0051,0.00776)	30	15	50.00	2.471	1.316	4.641	4.881e-03	4.62	2.034				
[0.00776,0.00968)	28	23	82.14	6.577e-01	3.272e-01	1.322	2.393e-01	1.29	7.064e-01	3.880			
[0.00968,0.013)	27	24	88.89	1.249	6.648e-01	2.347	4.893e-01	1.70	8.597e-01	2.949			
≥ 0.013	29	24	82.76	1.385	7.412e-01	2.589	3.070e-01	0.62	1.478e-01	2.092			
Quartiles													
< 0.0056	34	22	64.71	----	----	----	----	2.97	1.396		2.18e-03	1.90e-03	3.60e-04
[0.0056,0.0087)	33	18	54.55	2.105	1.232	3.596	6.445e-03	4.08	1.144				
[0.0087,0.011)	29	27	93.10	8.121e-01	4.350e-01	1.516	5.134e-01	1.32	6.160e-01	2.606			
≥ 0.011	44	36	81.82	1.659	9.437e-01	2.917	7.864e-02	0.84	5.530e-01	2.092			
Tertiles													
< 0.0066	43	27	62.79	----	----	----	----	2.97	1.396		1.79e-02	1.39e-02	5.62e-03
[0.0066,0.00997)	50	37	74.00	1.227	7.459e-01	2.017	4.210e-01	2.13	9.062e-01	3.880			
≥ 0.00997	47	39	82.98	1.987	1.212	3.260	6.528e-03	0.93	6.188e-01	1.947			
Profile Likelihood													
< 0.0086	67	40	59.70	----	----	----	----	3.26	2.075	4.597	2.65e-04	2.50e-04	7.67e-05
≥ 0.0086	73	63	86.30	2.080	1.394	3.102	3.322e-04	0.93	6.188e-01	1.947			
Quantitative*													
	140	103	73.57	1.000	0.985	1.016	9.600e-01				9.602e-01	9.600e-01	

*Units of pg / mL were used in **Quantitative model only**.

Cohort: Derivation
Outcome: Transplant Free Survival
Predictor: VCAM1 (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 335	27	17	62.96	----	----	----	----	1.67	7.392e-01		3.52e-01	3.67e-01	7.37e-01
[335,402)	28	19	67.86	8.290e-01	4.296e-01	1.600	5.762e-01	2.95	2.034	5.522			
[402,457)	29	23	79.31	1.264	6.741e-01	2.371	4.650e-01	1.11	6.626e-01	3.880			
[457,572)	28	22	78.57	1.369	7.245e-01	2.587	3.333e-01	0.82	3.587e-01	3.261			
≥ 572	28	22	78.57	1.436	7.609e-01	2.709	2.643e-01	2.09	8.378e-01	2.932			
Quartiles													
< 359	35	22	62.86	----	----	----	----	2.43	1.144		3.75e-02	3.46e-02	1.29e-01
[359,419)	33	23	69.70	9.261e-01	5.157e-01	1.663	7.973e-01	2.43	2.075				
[419,518)	37	31	83.78	1.798	1.039	3.110	3.600e-02	0.75	4.079e-01	2.300			
≥ 518	35	27	77.14	1.598	9.067e-01	2.816	1.050e-01	1.90	8.350e-01	2.853			
Tertiles													
< 378	47	30	63.83	----	----	----	----	2.43	1.144		3.53e-01	3.64e-01	4.80e-01
[378,480)	46	37	80.43	1.379	8.514e-01	2.235	1.914e-01	1.11	7.009e-01	2.434			
≥ 480	47	36	76.60	1.337	8.230e-01	2.173	2.406e-01	1.90	9.309e-01	2.850			
Profile Likelihood													
< 418.0	68	45	66.18	----	----	----	----	2.43	1.703	4.085	4.21e-03	3.95e-03	1.81e-02
≥ 418.0	72	58	80.56	1.769	1.194	2.619	4.418e-03	0.95	7.009e-01	2.127			
Quantitative	140	103	73.57	1.001	9.999e-01	1.002	7.967e-02				9.493e-02	7.928e-02	

Cohort: Derivation
Outcome: Transplant Free Survival
Predictor: S100A12 (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 15	27	16	59.26	----	----	----	----	2.97	1.947		1.60e-02	1.33e-02	7.43e-02
[15,21.6)	29	21	72.41	1.626	8.439e-01	3.131	1.464e-01	2.03	9.309e-01	3.034			
[21.6,29)	27	18	66.67	1.280	6.507e-01	2.517	4.747e-01	2.61	9.062e-01				
[29,51)	28	22	78.57	2.748	1.425	5.302	2.565e-03	0.74	6.188e-01	1.900			
≥ 51	29	26	89.66	2.134	1.140	3.994	1.777e-02	1.40	3.614e-01	2.850			
Quartiles													
< 17.8	35	22	62.86	----	----	----	----	2.43	1.714		3.45e-02	3.70e-02	1.85e-01
[17.8,25)	34	23	67.65	1.395	7.723e-01	2.521	2.696e-01	2.13	9.500e-01				
[25,45.2)	36	28	77.78	1.908	1.084	3.356	2.501e-02	0.82	7.064e-01	3.261			
≥ 45.2	35	30	85.71	2.093	1.204	3.637	8.843e-03	1.09	5.284e-01	2.664			
Tertiles													
< 19	40	26	65.00	----	----	----	----	2.41	1.703	4.597	2.18e-02	1.92e-02	1.59e-01
[19,37)	52	37	71.15	1.328	8.006e-01	2.204	2.717e-01	2.08	9.062e-01	3.751			
≥ 37	48	40	83.33	1.984	1.207	3.260	6.857e-03	0.82	6.407e-01	2.127			
Profile Likelihood													
< 26.5	77	50	64.94	----	----	----	----	2.43	1.947	4.044	9.41e-04	7.26e-04	8.74e-03
≥ 26.5	63	53	84.13	1.935	1.311	2.855	8.817e-04	0.82	6.407e-01	2.092			
Quantitative													
	140	103	73.57	1.004	1.001	1.008	2.295e-02				4.321e-02	2.168e-02	

Cohort: Derivation

Outcome: Progression Free Survival by FVC (Lung Transplant is Censored)

Predictor: Age (years)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN Pvalue
Quintiles													
< 59.5	26	20	76.92	----	----	----	----	1.27	1.029	2.012	9.95e-01	9.95e-01	6.26e-01
[59.5,66.1)	28	16	57.14	8.593e-01	4.430e-01	1.667	6.537e-01	0.84	4.079e-01	2.357			
[66.1,69.7)	27	20	74.07	9.362e-01	5.021e-01	1.746	8.356e-01	0.98	7.173e-01	2.530			
[69.7,73.9)	26	23	88.46	9.437e-01	5.165e-01	1.724	8.504e-01	0.95	8.241e-01	2.491			
≥ 73.9	28	25	89.29	9.193e-01	5.089e-01	1.661	7.803e-01	0.94	6.133e-01	2.606			
Quartiles													
< 61.2	33	24	72.73	----	----	----	----	1.27	7.502e-01	1.993	3.86e-01	4.04e-01	4.02e-01
[61.2,68.5)	34	24	70.59	1.068	6.038e-01	1.888	8.218e-01	0.78	4.517e-01	1.717			
[68.5,73.3)	35	26	74.29	6.965e-01	3.985e-01	1.217	2.041e-01	1.40	9.500e-01	2.606			
≥ 73.3	33	30	90.91	9.948e-01	5.799e-01	1.707	9.848e-01	0.90	6.133e-01	2.300			
Tertiles													
< 64.7	45	31	68.89	----	----	----	----	1.27	8.378e-01	1.993	8.23e-01	8.20e-01	1.50e-02
[64.7,71.3)	45	32	71.11	1.044	6.365e-01	1.712	8.646e-01	1.05	8.624e-01	2.275			
≥ 71.3	45	41	91.11	1.154	7.221e-01	1.844	5.494e-01	0.92	7.392e-01	1.714			
Profile Likelihood													
<67.9	64	46	71.88	----	----	----	----	1.03	6.708e-01	1.588	2.44e-01	2.40e-01	1.79e-01
≥67.9	71	58	81.69	7.927e-01	5.374e-01	1.169	2.415e-01	1.05	9.008e-01	2.078			
Quantitative													
	135	104	77.04	9.930e-01	9.675e-01	1.019	5.949e-01				5.956e-01	5.948e-01	
Predictor: Gender													
Female	36	25	69.44	----	----	----	----	1.40	0.901	2.13			
Male	99	79	79.80	1.32	0.841	2.076	2.27E-01	0.96	0.824	1.27	2.17E-01	2.25E-01	

Cohort: Derivation
Outcome: Progression Free Survival by FVC (Lung Transplant is Censored)
Predictor: Baseline (4-month) FVC % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 43.3	24	16	66.67	----	----	----	----	0.79	3.313e-01		3.08e-04	4.46e-04	2.37e-02
[43.3,56.6)	24	16	66.67	5.260e-01	2.613e-01	1.059	7.176e-02	1.72	7.775e-01	2.606			
[56.6,66)	23	19	82.61	7.053e-01	3.585e-01	1.387	3.118e-01	0.72	4.983e-01	1.311			
[66,77)	22	19	86.36	7.986e-01	4.095e-01	1.557	5.093e-01	0.94	6.708e-01	1.947			
≥ 77	25	19	76.00	2.385e-01	1.159e-01	4.907e-01	9.869e-05	2.23	1.273	4.616			
Quartiles													
< 47.8	30	21	70.00	----	----	----	----	0.67	3.313e-01	2.127	1.31e-03	1.15e-03	8.95e-02
[47.8,61.1)	30	22	73.33	6.081e-01	3.328e-01	1.111	1.059e-01	1.31	8.241e-01	2.086			
[61.1,74)	28	22	78.57	6.173e-01	3.358e-01	1.135	1.205e-01	0.92	7.091e-01	2.034			
≥ 74	30	24	80.00	2.921e-01	1.554e-01	5.493e-01	1.338e-04	1.97	1.112	4.044			
Tertiles													
< 52.8	40	26	65.00	----	----	----	----	0.79	5.010e-01	1.717	3.56e-03	3.72e-03	4.46e-01
[52.8,69.9)	40	32	80.00	8.177e-01	4.843e-01	1.380	4.513e-01	0.91	6.324e-01	1.925			
≥ 69.9	38	31	81.58	4.197e-01	2.413e-01	7.301e-01	2.114e-03	1.40	1.144	3.105			
Profile Likelihood													
< 76.9	93	70	75.27	----	----	----	----	0.90	7.091e-01	1.311	2.70e-05	6.54e-05	5.68e-03
≥ 76.9	25	19	76.00	3.362e-01	1.928e-01	5.861e-01	1.214e-04	2.23	1.273	4.616			
Quantitative													
	118	89	75.42	9.821e-01	9.710e-01	9.933e-01	1.837e-03				1.572e-03	1.788e-03	

Cohort: **Derivation**

Outcome: **Progression Free Survival by FVC (Lung Transplant is Censored)**

Predictor: **Baseline (4-month) DLco % Predicted**

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 28.9	21	15	71.43	----	----	----	----	0.90	3.833e-01		1.34e-04	1.45e-04	3.73e-01
[28.9,39)	22	16	72.73	1.043	5.131e-01	2.120	9.077e-01	0.82	3.258e-01	1.402			
[39,49.4)	21	18	85.71	6.202e-01	3.108e-01	1.238	1.754e-01	1.34	6.708e-01	2.078			
[49.4,60)	20	17	85.00	4.764e-01	2.329e-01	9.745e-01	4.229e-02	1.25	8.624e-01	2.086			
≥ 60	22	16	72.73	2.152e-01	9.900e-02	4.678e-01	1.055e-04	2.53	1.273				
Quartiles													
< 31.6	26	20	76.92	----	----	----	----	0.90	7.775e-01	1.714	9.29e-05	7.10e-05	2.16e-01
[31.6,43.8)	27	20	74.07	1.201	6.441e-01	2.238	5.649e-01	0.71	3.313e-01	1.572			
[43.8,57)	25	22	88.00	5.566e-01	3.000e-01	1.033	6.317e-02	1.34	8.049e-01	2.086			
≥ 57	28	20	71.43	2.937e-01	1.506e-01	5.728e-01	3.237e-04	2.36	1.273	4.616			
Tertiles													
< 36.6	35	24	68.57	----	----	----	----	0.84	6.708e-01	1.402	8.14e-04	5.97e-04	7.06e-01
[36.6,53.4)	37	32	86.49	6.150e-01	3.594e-01	1.052	7.612e-02	1.11	7.392e-01	1.925			
≥ 53.4	34	26	76.47	3.235e-01	1.786e-01	5.860e-01	1.967e-04	2.09	1.112	3.274			
Profile Likelihood													
<43.9	54	41	75.93	----	----	----	----	0.84	6.324e-01	1.087	1.71e-05	7.64e-06	1.81e-01
≥43.9	52	41	78.85	3.557e-01	2.222e-01	5.691e-01	1.636e-05	1.95	1.246	2.491			
Quantitative													
	106	82	77.36	9.695e-01	9.559e-01	9.833e-01	1.656e-05				1.547e-05	1.301e-05	

Cohort: Derivation
Outcome: Progression Free Survival by FVC (Lung Transplant is Censored)
Predictor: Baseline (4-month) CPI

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 43	22	17	77.27	----	----	----	----	2.36	1.333		1.17e-04	4.61e-05	7.25e-01
[43,50.8)	20	16	80.00	1.447	7.139e-01	2.932	3.055e-01	1.36	1.029	4.044			
[50.8,58.7)	21	19	90.48	2.809	1.389	5.680	4.039e-03	1.11	6.133e-01	2.012			
[58.7,64.5)	22	14	63.64	3.137	1.475	6.668	2.971e-03	0.82	6.708e-01				
≥ 64.5	21	16	76.19	5.291	2.503	1.118e+01	1.283e-05	0.78	3.258e-01				
Quartiles													
< 44.4	25	19	76.00	----	----	----	----	2.36	1.273	4.616	1.09e-04	3.56e-05	8.96e-01
[44.4,56)	27	23	85.19	1.803	9.606e-01	3.383	6.652e-02	1.25	8.624e-01	2.086			
[56,62.7)	27	22	81.48	2.621	1.363	5.041	3.888e-03	0.98	7.091e-01	1.717			
≥ 62.7	27	18	66.67	5.044	2.487	1.023e+01	7.322e-06	0.78	3.258e-01				
Tertiles													
< 47.7	34	26	76.47	----	----	----	----	2.08	1.273	4.044	5.56e-05	2.69e-05	7.34e-01
[47.7,59.8)	37	32	86.49	2.076	1.209	3.564	8.080e-03	1.11	7.173e-01	1.925			
≥ 59.8	35	24	68.57	3.878	2.118	7.101	1.120e-05	0.82	3.833e-01	9.500e-01			
Profile Likelihood													
<51.0	42	33	78.57	----	----	----	----	2.03	1.273	3.105	1.55e-05	1.35e-05	2.54e-01
≥51.0	64	49	76.56	2.845	1.744	4.640	2.808e-05	0.84	6.708e-01	1.246			
Quantitative	106	82	77.36	1.044	1.025	1.064	4.613e-06				4.169e-06	4.507e-06	

Cohort: Derivation
Outcome: Progression Free Survival by FVC (Lung Transplant is Censored)
Predictor: Baseline (3-month) FVC % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 43.1	22	14	63.64	----	----	----	----	0.67	3.258e-01		1.38e-03	2.31e-03	1.05e-01
[43.1,56.5)	21	13	61.90	6.130e-01	2.867e-01	1.310	2.067e-01	1.57	4.873e-01				
[56.5,65.7)	22	18	81.82	7.273e-01	3.578e-01	1.479	3.791e-01	0.72	3.751e-01	1.925			
[65.7,76.7)	19	16	84.21	7.981e-01	3.883e-01	1.641	5.396e-01	0.94	6.133e-01	2.034			
≥ 76.7	22	16	72.73	2.439e-01	1.121e-01	5.307e-01	3.748e-04	2.23	1.273				
Quartiles													
< 47.8	27	18	66.67	----	----	----	----	0.50	3.285e-01		1.05e-03	1.00e-03	6.35e-02
[47.8,60.5)	27	19	70.37	6.046e-01	3.156e-01	1.158	1.293e-01	1.03	6.324e-01	2.530			
[60.5,73.4)	27	21	77.78	5.777e-01	3.035e-01	1.100	9.471e-02	0.91	6.133e-01	2.034			
≥ 73.4	25	19	76.00	2.528e-01	1.253e-01	5.098e-01	1.217e-04	2.08	1.144	4.616			
Tertiles													
< 52.4	36	22	61.11	----	----	----	----	0.78	3.587e-01	2.127	6.02e-03	6.16e-03	6.14e-01
[52.4,69.6)	36	28	77.78	7.997e-01	4.546e-01	1.407	4.379e-01	0.91	4.983e-01	1.717			
≥ 69.6	34	27	79.41	4.070e-01	2.238e-01	7.401e-01	3.218e-03	1.95	1.144	3.105			
Profile Likelihood													
< 76.7	84	61	72.62	----	----	----	----	0.86	6.133e-01	1.333	6.01e-05	1.39e-04	1.30e-02
≥ 76.7	22	16	72.73	3.229e-01	1.761e-01	5.921e-01	2.578e-04	2.23	1.273				
Quantitative	106	77	72.64	9.809e-01	9.692e-01	9.928e-01	1.696e-03				1.477e-03	1.661e-03	

Cohort: Derivation

Outcome: Progression Free Survival by FVC (Lung Transplant is Censored)

Predictor: Baseline (3-month) DLco % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 28.6	18	14	77.78	----	----	----	----	0.90	2.300e-01	2.127	2.75e-04	3.15e-04	3.34e-01
[28.6,38)	18	10	55.56	8.671e-01	3.815e-01	1.971	7.335e-01	0.33	2.683e-01				
[38,49.9)	20	17	85.00	6.062e-01	2.976e-01	1.235	1.680e-01	1.09	6.708e-01	2.034			
[49.9,61)	18	15	83.33	4.540e-01	2.158e-01	9.549e-01	3.736e-02	1.25	8.049e-01	2.357			
≥ 61	20	14	70.00	1.822e-01	7.963e-02	4.170e-01	5.565e-05	3.10	1.273				
Quartiles													
< 31.4	23	17	73.91	----	----	----	----	0.91	6.708e-01	2.127	3.82e-05	4.36e-05	6.93e-02
[31.4,41.3)	24	17	70.83	1.430	7.230e-01	2.828	3.041e-01	0.63	3.258e-01	1.572			
[41.3,57.2)	23	20	86.96	6.895e-01	3.582e-01	1.327	2.657e-01	1.14	6.708e-01	2.012			
≥ 57.2	24	16	66.67	2.581e-01	1.224e-01	5.440e-01	3.712e-04	2.53	1.993				
Tertiles													
< 34.5	31	21	67.74	----	----	----	----	0.90	3.313e-01	1.714	7.97e-04	7.84e-04	4.65e-01
[34.5,54.3)	32	26	81.25	7.283e-01	4.080e-01	1.300	2.834e-01	0.98	6.324e-01	1.925			
≥ 54.3	31	23	74.19	3.161e-01	1.672e-01	5.976e-01	3.930e-04	2.36	1.144	4.153			
Profile Likelihood													
<57.5	70	54	77.14	----	----	----	----	0.90	6.708e-01	1.311	1.63e-05	3.69e-05	5.65e-02
≥57.5	24	16	66.67	2.897e-01	1.564e-01	5.368e-01	8.224e-05	2.53	1.993				
Quantitative	94	70	74.47	9.693e-01	9.551e-01	9.838e-01	3.671e-05				3.568e-05	2.665e-05	

Cohort: **Derivation**

Outcome: **Progression Free Survival by FVC (Lung Transplant is Censored)**

Predictor: **Baseline (3-month) CPI**

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 42.8	19	14	73.68	----	----	----	----	2.36	1.333		1.82e-04	7.92e-05	7.15e-01
[42.8,51.5)	18	14	77.78	1.574	7.255e-01	3.416	2.509e-01	1.95	9.199e-01				
[51.5,59)	19	16	84.21	3.117	1.421	6.837	4.551e-03	1.11	4.517e-01	2.012			
[59,65.1)	19	11	57.89	3.545	1.500	8.375	3.923e-03	0.71	6.708e-01				
≥ 65.1	19	15	78.95	5.843	2.595	1.315e+01	2.018e-05	0.38	2.300e-01				
Quartiles													
< 44.3	23	18	78.26	----	----	----	----	2.36	1.273	4.616	3.22e-04	1.36e-04	8.77e-01
[44.3,56.1)	24	18	75.00	1.536	7.808e-01	3.023	2.137e-01	1.25	7.173e-01				
[56.1,62.8)	24	19	79.17	3.059	1.522	6.147	1.693e-03	0.95	6.324e-01	1.572			
≥ 62.8	23	15	65.22	4.520	2.137	9.559	7.909e-05	0.78	3.258e-01				
Tertiles													
< 47.6	31	23	74.19	----	----	----	----	2.08	1.273	4.153	8.70e-05	3.65e-05	7.94e-01
[47.6,59.9)	32	27	84.38	2.113	1.183	3.774	1.150e-02	0.98	6.324e-01	1.925			
≥ 59.9	31	20	64.52	4.326	2.221	8.424	1.655e-05	0.71	3.313e-01	9.500e-01			
Profile Likelihood													
<50.8	37	28	75.68	----	----	----	----	2.03	1.273	3.261	2.41e-05	2.11e-05	2.71e-01
≥50.8	57	42	73.68	3.056	1.788	5.226	4.462e-05	0.78	5.010e-01	1.311			
Quantitative	94	70	74.47	1.046	1.026	1.067	7.454e-06				7.321e-06	6.775e-06	

Cohort: Derivation
Outcome: Progression Free Survival by FVC (Lung Transplant is Censored)
Predictor: MMP7 (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 2.7	26	21	80.77	----	----	----	----	1.27	8.624e-01	2.606	5.05e-03	2.57e-03	2.25e-02
[2.7,3.76)	23	17	73.91	6.513e-01	3.421e-01	1.240	1.918e-01	2.08	9.199e-01				
[3.76,4.99)	27	17	62.96	7.609e-01	3.986e-01	1.453	4.074e-01	1.36	8.049e-01				
[4.99,6.41)	26	23	88.46	2.056	1.128	3.748	1.863e-02	0.53	3.313e-01	1.402			
≥ 6.41	26	20	76.92	1.351	7.240e-01	2.521	3.444e-01	0.95	8.241e-01	2.111			
Quartiles													
< 2.92	32	25	78.12	----	----	----	----	1.34	9.582e-01	2.664	2.10e-02	1.78e-02	1.43e-01
[2.92,4.3)	30	21	70.00	9.673e-01	5.404e-01	1.731	9.109e-01	1.72	8.049e-01				
[4.3,5.73)	33	25	75.76	1.663	9.484e-01	2.918	7.589e-02	0.94	5.749e-01	1.993			
≥ 5.73	33	27	81.82	2.082	1.181	3.670	1.123e-02	0.86	6.133e-01	1.588			
Tertiles													
< 3.51	43	32	74.42	----	----	----	----	1.72	1.144	2.664	1.45e-02	1.34e-02	1.49e-01
[3.51,5.35)	42	30	71.43	1.460	8.847e-01	2.409	1.387e-01	0.94	6.708e-01	1.572			
≥ 5.35	43	36	83.72	2.070	1.265	3.387	3.786e-03	0.86	6.324e-01	1.925			
Profile Likelihood													
< 4.4	66	49	74.24	----	----	----	----	1.57	1.112	2.491	1.69e-04	1.20e-04	1.45e-03
≥ 4.4	62	49	79.03	2.265	1.479	3.469	1.693e-04	0.84	6.324e-01	1.087			
Quantitative													
	128	98	76.56	1.077	1.010	1.149	2.271e-02				2.992e-02	2.232e-02	

Cohort: Derivation

Outcome: Progression Free Survival by FVC (Lung Transplant is Censored)

Predictor: ICAM1 (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 158	27	23	85.19	----	----	----	----	1.13	9.199e-01	2.357	3.73e-01	3.67e-01	2.31e-01
[158,205)	26	18	69.23	8.189e-01	4.397e-01	1.525	5.289e-01	1.36	8.624e-01	2.664			
[205,252)	27	21	77.78	1.336	7.380e-01	2.419	3.387e-01	0.67	4.079e-01	2.606			
[252,351)	27	19	70.37	1.503	8.118e-01	2.783	1.948e-01	0.94	5.284e-01	2.034			
≥ 351	28	23	82.14	1.079	6.012e-01	1.936	7.993e-01	1.40	8.241e-01	2.086			
Quartiles													
< 175	32	27	84.38	----	----	----	----	1.11	9.199e-01	2.300	7.82e-01	7.84e-01	5.61e-01
[175,230)	35	27	77.14	1.290	7.535e-01	2.209	3.531e-01	0.80	6.324e-01	2.127			
[230,318)	33	21	63.64	1.112	6.274e-01	1.972	7.157e-01	1.09	6.708e-01	3.031			
≥ 318	35	29	82.86	1.248	7.352e-01	2.117	4.123e-01	0.98	8.241e-01	1.947			
Tertiles													
< 197	46	36	78.26	----	----	----	----	1.27	1.029	2.231	2.15e-01	2.22e-01	3.89e-01
[197,274)	43	33	76.74	1.486	9.228e-01	2.393	1.032e-01	0.79	6.133e-01	2.275			
≥ 274	46	35	76.09	1.365	8.542e-01	2.181	1.932e-01	0.94	8.241e-01	1.717			
Profile Likelihood													
<202.5	50	38	76.00	----	----	----	----	1.34	1.054	2.300	3.14e-02	3.30e-02	6.74e-02
≥202.5	85	66	77.65	1.544	1.033	2.306	3.410e-02	0.86	7.392e-01	1.333			
Quantitative	135	104	77.04	1.001	9.995e-01	1.002	2.172e-01				2.287e-01	2.168e-01	

Cohort: **Derivation**

Outcome: **Progression Free Survival by FVC (Lung Transplant is Censored)**

Predictor: **IL8 (ng / mL)**

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 0.0051	25	16	64.00	----	----	----	----	1.25	1.054	2.491	1.80e-02	1.29e-02	2.53e-03
[0.0051,0.00776)	27	21	77.78	2.149	1.118	4.130	2.174e-02	1.92	1.029	3.261			
[0.00776,0.00968)	28	21	75.00	9.005e-01	4.683e-01	1.732	7.534e-01	0.91	6.324e-01	2.300			
[0.00968,0.013)	27	25	92.59	1.156	6.006e-01	2.227	6.636e-01	0.84	6.708e-01	1.361			
≥ 0.013	28	21	75.00	1.888	1.004	3.548	4.839e-02	0.61	3.258e-01	2.086			
Quartiles													
< 0.0056	32	21	65.62	----	----	----	----	1.40	1.054	2.491	2.51e-03	1.64e-03	3.28e-04
[0.0056,0.0087)	31	24	77.42	2.342	1.355	4.049	2.315e-03	1.92	1.029	3.261			
[0.0087,0.011)	29	24	82.76	9.761e-01	5.423e-01	1.757	9.356e-01	0.72	5.010e-01	2.275			
≥ 0.011	43	35	81.40	1.664	9.223e-01	3.002	9.079e-02	0.84	3.587e-01	1.087			
Tertiles													
< 0.0066	41	28	68.29	----	----	----	----	1.57	1.112	2.431	3.95e-03	2.38e-03	7.25e-04
[0.0066,0.00997)	48	38	79.17	1.209	7.382e-01	1.979	4.512e-01	0.95	7.502e-01	2.111			
≥ 0.00997	46	38	82.61	2.233	1.361	3.665	1.477e-03	0.84	5.284e-01	1.112			
Profile Likelihood													
< 0.0092	74	53	71.62	----	----	----	----	1.40	1.112	2.231	2.27e-04	1.45e-04	5.32e-05
≥ 0.0092	61	51	83.61	2.119	1.427	3.147	1.988e-04	0.79	6.133e-01	9.774e-01			
Quantitative*													
	135	104	77.04	1.001	0.9874	1.015	8.875e-01				8.888e-01	8.874e-01	

*Units of pg / mL were used in **Quantitative model only**.

Cohort: Derivation
Outcome: Progression Free Survival by FVC (Lung Transplant is Censored)
Predictor: VCAM1 (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 335	26	18	69.23	----	----	----	----	1.31	9.582e-01	2.431	8.74e-03	1.32e-02	5.81e-02
[335,402)	27	18	66.67	5.672e-01	2.904e-01	1.108	9.688e-02	2.08	1.402				
[402,457)	29	23	79.31	1.497	8.044e-01	2.785	2.030e-01	0.75	4.983e-01	1.572			
[457,572)	28	21	75.00	1.312	6.966e-01	2.472	4.002e-01	0.82	5.749e-01	2.086			
≥ 572	25	24	96.00	1.503	8.146e-01	2.771	1.924e-01	0.94	5.284e-01	1.947			
Quartiles													
< 359	34	23	67.65	----	----	----	----	1.33	9.582e-01	2.491	3.33e-02	3.05e-02	2.23e-01
[359,419)	32	24	75.00	1.016	5.729e-01	1.803	9.560e-01	1.57	9.062e-01	2.530			
[419,518)	37	28	75.68	1.903	1.085	3.338	2.471e-02	0.78	4.873e-01	1.714			
≥ 518	32	29	90.62	1.729	9.969e-01	2.999	5.132e-02	0.94	5.284e-01	1.717			
Tertiles													
< 378	46	30	65.22	----	----	----	----	1.34	9.582e-01	2.491	6.39e-02	7.02e-02	4.16e-01
[378,480)	45	35	77.78	1.521	9.321e-01	2.483	9.319e-02	1.05	7.091e-01	2.012			
≥ 480	44	39	88.64	1.721	1.067	2.778	2.618e-02	0.86	6.708e-01	1.714			
Profile Likelihood													
< 399.5	53	36	67.92	----	----	----	----	1.92	1.311	2.431	1.13e-03	1.30e-03	1.42e-02
≥ 399.5	82	68	82.93	1.954	1.291	2.957	1.532e-03	0.84	6.708e-01	1.054			
Quantitative													
	135	104	77.04	1.001	1.000	1.002	2.261e-02				3.208e-02	2.213e-02	

Cohort: Derivation
Outcome: Progression Free Survival by FVC (Lung Transplant is Censored)
Predictor: S100A12 (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 15	26	18	69.23	----	----	----	----	2.01	1.342	3.274	2.10e-03	8.05e-04	1.58e-03
[15,21.6)	29	21	72.41	2.012	1.056	3.830	3.340e-02	0.98	6.708e-01	2.034			
[21.6,29)	26	21	80.77	1.356	7.208e-01	2.551	3.449e-01	1.33	9.062e-01	2.606			
[29,51)	26	23	88.46	3.608	1.906	6.829	8.065e-05	0.74	4.079e-01	1.054			
≥ 51	28	21	75.00	1.706	9.073e-01	3.210	9.731e-02	0.94	3.614e-01	2.606			
Quartiles													
< 17.8	34	25	73.53	----	----	----	----	1.59	1.029	2.530	1.82e-01	1.79e-01	1.49e-01
[17.8,25)	34	24	70.59	1.204	6.848e-01	2.115	5.195e-01	1.27	7.775e-01	2.431			
[25,45.2)	34	30	88.24	1.748	1.025	2.979	4.017e-02	0.79	6.324e-01	1.311			
≥ 45.2	33	25	75.76	1.503	8.621e-01	2.621	1.508e-01	0.94	3.614e-01	2.231			
Tertiles													
< 19	39	28	71.79	----	----	----	----	1.36	9.500e-01	2.491	6.26e-02	5.46e-02	1.11e-02
[19,37)	51	39	76.47	1.194	7.335e-01	1.943	4.761e-01	1.25	7.775e-01	2.034			
≥ 37	45	37	82.22	1.775	1.084	2.905	2.261e-02	0.82	4.983e-01	1.087			
Profile Likelihood													
< 31.5	85	63	74.12	----	----	----	----	1.34	1.029	2.034	5.68e-03	4.09e-03	4.67e-04
≥ 31.5	50	41	82.00	1.776	1.194	2.640	4.556e-03	0.79	3.614e-01	1.054			
Quantitative	135	104	77.04	1.001	9.966e-01	1.005	7.190e-01				7.249e-01	7.189e-01	

Cohort: Derivation

Outcome: Progression Free Survival by DLCO (Lung Transplant is Censored)

Predictor: Age (years)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN Pvalue
Quintiles													
< 59.5	26	18	69.23	----	----	----	----	1.09	4.736e-01		8.74e-01	8.76e-01	1.43e-01
[59.5,66.1)	28	17	60.71	1.199	6.136e-01	2.342	5.957e-01	0.84	4.079e-01	2.242			
[66.1,69.7)	27	20	74.07	9.012e-01	4.717e-01	1.722	7.527e-01	1.11	8.624e-01	2.519			
[69.7,73.9)	26	24	92.31	1.196	6.447e-01	2.219	5.701e-01	0.91	8.049e-01	2.070			
≥ 73.9	28	25	89.29	1.135	6.160e-01	2.090	6.852e-01	1.14	6.407e-01	2.111			
Quartiles													
< 61.2	33	22	66.67	----	----	----	----	1.09	4.736e-01	2.645	3.36e-01	3.47e-01	1.33e-01
[61.2,68.5)	34	25	73.53	1.215	6.818e-01	2.167	5.082e-01	0.86	7.173e-01	1.821			
[68.5,73.3)	35	27	77.14	7.816e-01	4.421e-01	1.382	3.966e-01	1.70	9.500e-01	2.519			
≥ 73.3	33	30	90.91	1.189	6.831e-01	2.070	5.403e-01	0.90	6.626e-01	1.396			
Tertiles													
< 64.7	45	31	68.89	----	----	----	----	0.84	4.791e-01	1.947	2.46e-01	2.48e-01	2.25e-02
[64.7,71.3)	45	31	68.89	7.817e-01	4.725e-01	1.293	3.376e-01	1.11	9.500e-01	2.491			
≥ 71.3	45	42	93.33	1.164	7.296e-01	1.856	5.245e-01	0.86	7.091e-01	1.396			
Profile Likelihood													
<71.3	90	62	68.89	----	----	----	----	1.03	8.624e-01	1.947	1.69e-01	1.63e-01	1.41e-02
≥71.3	45	42	93.33	1.323	8.909e-01	1.966	1.652e-01	0.86	7.091e-01	1.396			
Quantitative													
	135	104	77.04	9.960e-01	9.696e-01	1.023	7.672e-01				7.675e-01	7.672e-01	

Predictor: Gender

Female	36	29	80.56	----	----	----	----	1.24	0.862	2.13			
Male	99	75	75.76	1.11	0.721	1.705	6.38E-01	0.91	0.794	1.40	6.36E-01	6.38E-01	

Cohort: Derivation
Outcome: Progression Free Survival by DLCO (Lung Transplant is Censored)
Predictor: Baseline (4-month) FVC % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 43.3	24	17	70.83	----	----	----	----	0.79	4.025e-01	2.300	2.86e-03	5.47e-03	1.47e-01
[43.3,56.6)	24	16	66.67	8.278e-01	4.158e-01	1.648	5.905e-01	0.84	5.558e-01				
[56.6,66)	23	20	86.96	8.510e-01	4.450e-01	1.627	6.256e-01	0.84	7.091e-01	1.582			
[66,77)	22	18	81.82	7.571e-01	3.886e-01	1.475	4.135e-01	1.33	9.774e-01	1.947			
≥ 77	25	18	72.00	2.969e-01	1.456e-01	6.057e-01	8.428e-04	2.06	1.112				
Quartiles													
< 47.8	30	21	70.00	----	----	----	----	0.78	3.587e-01	2.127	2.00e-03	3.11e-03	1.58e-01
[47.8,61.1)	30	22	73.33	8.229e-01	4.505e-01	1.503	5.261e-01	0.90	5.941e-01	1.235			
[61.1,74)	28	24	85.71	8.321e-01	4.621e-01	1.498	5.402e-01	1.25	7.173e-01	1.744			
≥ 74	30	22	73.33	3.414e-01	1.808e-01	6.447e-01	9.218e-04	1.82	1.112				
Tertiles													
< 52.8	40	27	67.50	----	----	----	----	0.79	5.010e-01	1.703	1.56e-03	1.68e-03	1.92e-01
[52.8,69.9)	40	33	82.50	7.860e-01	4.714e-01	1.311	3.559e-01	0.91	7.091e-01	1.396			
≥ 69.9	38	29	76.32	3.868e-01	2.218e-01	6.744e-01	8.135e-04	1.47	1.144	3.031			
Profile Likelihood													
< 76.9	93	71	76.34	----	----	----	----	0.86	7.775e-01	1.246	8.49e-05	2.07e-04	1.44e-02
≥ 76.9	25	18	72.00	3.497e-01	1.965e-01	6.224e-01	3.539e-04	2.06	1.112				
Quantitative	118	89	75.42	9.828e-01	9.720e-01	9.938e-01	2.218e-03				1.917e-03	2.183e-03	

Cohort: **Derivation**

Outcome: **Progression Free Survival by DLCO (Lung Transplant is Censored)**

Predictor: **Baseline (4-month) DLco % Predicted**

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 28.9	21	16	76.19	----	----	----	----	0.90	4.025e-01	1.446	1.20e-02	8.13e-03	7.23e-01
[28.9,39)	22	15	68.18	6.568e-01	3.224e-01	1.338	2.469e-01	0.99	7.775e-01				
[39,49.4)	21	18	85.71	5.813e-01	2.938e-01	1.150	1.191e-01	0.86	5.941e-01	2.034			
[49.4,60)	20	16	80.00	3.876e-01	1.902e-01	7.901e-01	9.090e-03	1.33	9.774e-01				
≥ 60	22	17	77.27	2.928e-01	1.408e-01	6.087e-01	1.004e-03	1.74	1.035				
Quartiles													
< 31.6	26	21	80.77	----	----	----	----	0.90	7.775e-01	1.402	4.50e-03	3.19e-03	5.26e-01
[31.6,43.8)	27	19	70.37	9.847e-01	5.273e-01	1.839	9.614e-01	0.64	5.010e-01	1.087			
[43.8,57)	25	21	84.00	4.935e-01	2.669e-01	9.124e-01	2.430e-02	1.70	9.774e-01	2.519			
≥ 57	28	21	75.00	3.853e-01	2.041e-01	7.273e-01	3.259e-03	1.74	1.112	4.153			
Tertiles													
< 36.6	35	25	71.43	----	----	----	----	0.90	7.775e-01	1.402	1.34e-02	1.10e-02	9.46e-01
[36.6,53.4)	37	31	83.78	6.552e-01	3.855e-01	1.113	1.180e-01	0.98	7.091e-01	1.703			
≥ 53.4	34	26	76.47	4.236e-01	2.391e-01	7.506e-01	3.251e-03	1.74	1.035	2.850			
Profile Likelihood													
<41.0	51	39	76.47	----	----	----	----	0.84	5.941e-01	1.087	7.47e-05	3.47e-05	2.92e-02
≥41.0	55	43	78.18	3.897e-01	2.459e-01	6.175e-01	6.015e-05	1.70	1.144	2.341			
Quantitative													
	106	82	77.36	9.770e-01	9.636e-01	9.906e-01	9.591e-04				9.372e-04	8.841e-04	

Cohort: Derivation
Outcome: Progression Free Survival by DLCO (Lung Transplant is Censored)
Predictor: Baseline (4-month) CPI

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 43	22	16	72.73	----	----	----	----	1.74	1.112		2.00e-03	1.22e-03	4.41e-01
[43,50.8)	20	17	85.00	1.305	6.503e-01	2.618	4.538e-01	1.95	9.774e-01	3.261			
[50.8,58.7)	21	17	80.95	2.123	1.039	4.340	3.901e-02	1.23	8.405e-01	2.341			
[58.7,64.5)	22	15	68.18	3.113	1.484	6.530	2.652e-03	0.67	5.558e-01	1.582			
≥ 64.5	21	17	80.95	3.497	1.712	7.144	5.915e-04	0.84	3.313e-01	1.714			
Quartiles													
< 44.4	25	19	76.00	----	----	----	----	1.74	1.112		2.42e-03	1.32e-03	7.43e-01
[44.4,56)	27	22	81.48	1.314	7.030e-01	2.455	3.924e-01	1.25	8.624e-01	2.850			
[56,62.7)	27	22	81.48	2.280	1.199	4.337	1.197e-02	0.95	6.708e-01	1.582			
≥ 62.7	27	19	70.37	3.233	1.664	6.281	5.336e-04	0.82	3.313e-01	1.265			
Tertiles													
< 47.7	34	26	76.47	----	----	----	----	1.74	1.087	2.645	7.18e-04	3.37e-04	4.73e-01
[47.7,59.8)	37	30	81.08	1.628	9.417e-01	2.816	8.096e-02	1.23	8.405e-01	1.821			
≥ 59.8	35	26	74.29	3.117	1.744	5.572	1.250e-04	0.82	5.558e-01	1.123			
Profile Likelihood													
<56.2	55	43	78.18	----	----	----	----	1.47	1.144	2.341	6.55e-05	2.95e-05	6.97e-02
≥56.2	51	39	76.47	2.585	1.632	4.095	5.208e-05	0.82	5.941e-01	9.774e-01			
Quantitative													
	106	82	77.36	1.035	1.016	1.054	2.624e-04				2.541e-04	2.599e-04	

Cohort: **Derivation**

Outcome: **Progression Free Survival by DLCO (Lung Transplant is Censored)**

Predictor: **Baseline (3-month) FVC % Predicted**

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 43.1	22	15	68.18	----	----	----	----	0.67	3.313e-01		4.55e-03	8.65e-03	2.56e-01
[43.1,56.5)	21	13	61.90	1.015	4.748e-01	2.168	9.703e-01	0.84	4.873e-01				
[56.5,65.7)	22	19	86.36	8.772e-01	4.447e-01	1.730	7.054e-01	0.86	6.626e-01	2.242			
[65.7,76.7)	19	16	84.21	8.265e-01	4.067e-01	1.680	5.984e-01	1.33	9.774e-01	1.947			
≥ 76.7	22	15	68.18	3.072e-01	1.437e-01	6.567e-01	2.326e-03	2.06	1.144				
Quartiles													
< 47.8	27	18	66.67	----	----	----	----	0.67	3.313e-01	2.300	3.08e-03	4.78e-03	2.48e-01
[47.8,60.5)	27	19	70.37	8.213e-01	4.286e-01	1.574	5.529e-01	0.90	5.558e-01	1.582			
[60.5,73.4)	27	23	85.19	8.118e-01	4.368e-01	1.509	5.096e-01	0.98	7.091e-01	1.744			
≥ 73.4	25	18	72.00	3.231e-01	1.620e-01	6.447e-01	1.347e-03	1.95	1.144				
Tertiles													
< 52.4	36	23	63.89	----	----	----	----	0.84	5.010e-01	1.714	3.70e-03	4.03e-03	4.00e-01
[52.4,69.6)	36	29	80.56	8.344e-01	4.814e-01	1.446	5.189e-01	0.86	6.407e-01	1.265			
≥ 69.6	34	26	76.47	4.010e-01	2.220e-01	7.242e-01	2.447e-03	1.47	1.246	3.031			
Profile Likelihood													
< 76.7	84	63	75.00	----	----	----	----	0.90	7.091e-01	1.246	1.31e-04	3.10e-04	2.27e-02
≥ 76.7	22	15	68.18	3.353e-01	1.807e-01	6.222e-01	5.302e-04	2.06	1.144				
Quantitative	106	78	73.58	9.819e-01	9.706e-01	9.934e-01	2.023e-03				1.773e-03	1.992e-03	

Cohort: **Derivation**

Outcome: **Progression Free Survival by DLCO (Lung Transplant is Censored)**

Predictor: **Baseline (3-month) DLco % Predicted**

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 28.6	18	13	72.22	----	----	----	----	0.91	2.300e-01		2.82e-02	2.61e-02	9.31e-01
[28.6,38)	18	12	66.67	7.564e-01	3.411e-01	1.677	4.919e-01	0.78	3.313e-01				
[38,49.9)	20	17	85.00	6.042e-01	2.916e-01	1.252	1.753e-01	0.86	6.708e-01	1.821			
[49.9,61)	18	15	83.33	5.134e-01	2.426e-01	1.087	8.134e-02	1.25	9.774e-01	2.645			
≥ 61	20	15	75.00	2.943e-01	1.333e-01	6.496e-01	2.461e-03	2.06	8.433e-01				
Quartiles													
< 31.4	23	18	78.26	----	----	----	----	0.91	4.353e-01	1.446	5.00e-03	5.36e-03	4.19e-01
[31.4,41.3)	24	17	70.83	1.009	5.174e-01	1.968	9.789e-01	0.71	5.010e-01	1.087			
[41.3,57.2)	23	20	86.96	6.413e-01	3.385e-01	1.215	1.730e-01	1.25	8.049e-01	1.947			
≥ 57.2	24	17	70.83	3.425e-01	1.704e-01	6.883e-01	2.622e-03	2.07	1.035				
Tertiles													
< 34.5	31	22	70.97	----	----	----	----	0.91	4.025e-01	1.446	1.79e-02	1.73e-02	7.81e-01
[34.5,54.3)	32	26	81.25	7.529e-01	4.259e-01	1.331	3.288e-01	0.98	7.091e-01	1.703			
≥ 54.3	31	24	77.42	4.311e-01	2.364e-01	7.864e-01	6.077e-03	1.47	8.433e-01	2.645			
Profile Likelihood													
<41.0	46	35	76.09	----	----	----	----	0.84	5.558e-01	1.087	1.74e-04	8.68e-05	4.37e-02
≥41.0	48	37	77.08	3.898e-01	2.398e-01	6.336e-01	1.443e-04	1.70	1.144	2.242			
Quantitative	94	72	76.60	9.774e-01	9.637e-01	9.913e-01	1.530e-03				1.539e-03	1.374e-03	

Cohort: Derivation
Outcome: Progression Free Survival by DLCO (Lung Transplant is Censored)
Predictor: Baseline (3-month) CPI

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 42.8	19	13	68.42	----	----	----	----	2.06	1.333		5.32e-03	5.12e-03	6.66e-01
[42.8,51.5)	18	16	88.89	1.686	7.941e-01	3.578	1.739e-01	1.14	9.774e-01	2.645			
[51.5,59)	19	15	78.95	2.536	1.156	5.560	2.019e-02	0.99	8.405e-01				
[59,65.1)	19	13	68.42	3.454	1.536	7.769	2.722e-03	0.64	5.010e-01				
≥ 65.1	19	15	78.95	3.565	1.636	7.770	1.385e-03	0.90	2.300e-01	2.127			
Quartiles													
< 44.3	23	17	73.91	----	----	----	----	1.74	1.035		1.64e-03	1.08e-03	4.08e-01
[44.3,56.1)	24	19	79.17	1.440	7.382e-01	2.809	2.848e-01	1.34	9.774e-01	2.519			
[56.1,62.8)	24	20	83.33	3.023	1.524	5.996	1.542e-03	0.84	5.558e-01	1.402			
≥ 62.8	23	16	69.57	3.161	1.554	6.430	1.489e-03	0.90	3.313e-01	2.127			
Tertiles													
< 47.6	31	23	74.19	----	----	----	----	1.74	1.087	2.645	1.41e-03	1.01e-03	5.80e-01
[47.6,59.9)	32	27	84.38	1.909	1.072	3.398	2.797e-02	0.98	7.173e-01	1.703			
≥ 59.9	31	22	70.97	3.082	1.665	5.707	3.411e-04	0.78	4.025e-01	1.265			
Profile Likelihood													
<56.2	48	37	77.08	----	----	----	----	1.47	1.144	2.242	1.59e-04	7.78e-05	1.09e-01
≥56.2	46	35	76.09	2.580	1.587	4.192	1.308e-04	0.78	5.558e-01	9.856e-01			
Quantitative	94	72	76.60	1.034	1.015	1.053	4.403e-04				4.409e-04	4.152e-04	

Cohort: Derivation
Outcome: Progression Free Survival by DLCO (Lung Transplant is Censored)
Predictor: MMP7 (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 2.7	26	20	76.92	----	----	----	----	1.33	4.873e-01	2.431	5.09e-01	5.06e-01	5.01e-01
[2.7,3.76)	23	17	73.91	7.108e-01	3.707e-01	1.363	3.041e-01	1.47	8.433e-01				
[3.76,4.99)	27	19	70.37	9.176e-01	4.823e-01	1.746	7.933e-01	0.84	6.708e-01	2.519			
[4.99,6.41)	26	22	84.62	1.267	6.908e-01	2.325	4.441e-01	0.98	3.751e-01	1.821			
≥ 6.41	26	21	80.77	9.917e-01	5.359e-01	1.835	9.787e-01	0.95	8.378e-01	2.127			
Quartiles													
< 2.92	32	25	78.12	----	----	----	----	1.40	8.433e-01	2.431	4.19e-01	4.34e-01	5.69e-01
[2.92,4.3)	30	21	70.00	7.793e-01	4.303e-01	1.411	4.107e-01	0.91	7.173e-01				
[4.3,5.73)	33	25	75.76	1.203	6.898e-01	2.099	5.144e-01	0.86	5.284e-01	2.034			
≥ 5.73	33	28	84.85	1.190	6.923e-01	2.047	5.286e-01	0.98	8.378e-01	1.821			
Tertiles													
< 3.51	43	31	72.09	----	----	----	----	1.47	8.433e-01	2.491	2.70e-01	2.80e-01	3.69e-01
[3.51,5.35)	42	31	73.81	1.379	8.315e-01	2.288	2.130e-01	0.84	5.749e-01	1.265			
≥ 5.35	43	37	86.05	1.440	8.911e-01	2.326	1.366e-01	0.98	8.378e-01	1.821			
Profile Likelihood													
< 4.0	53	39	73.58	----	----	----	----	1.40	8.433e-01	2.431	4.68e-02	4.82e-02	5.53e-02
≥ 4.0	75	60	80.00	1.506	1.001	2.267	4.948e-02	0.90	8.241e-01	1.265			
Quantitative	128	99	77.34	1.033	0.9643	1.106	3.583e-01				3.667e-01	3.582e-01	

Cohort: Derivation
Outcome: Progression Free Survival by DLCO (Lung Transplant is Censored)
Predictor: ICAM1 (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 158	27	23	85.19	----	----	----	----	1.14	7.173e-01	2.070	9.62e-01	9.61e-01	5.43e-01
[158,205)	26	20	76.92	1.022	5.601e-01	1.864	9.441e-01	0.86	8.049e-01	2.300			
[205,252)	27	20	74.07	1.143	6.264e-01	2.084	6.639e-01	0.90	5.749e-01	2.491			
[252,351)	27	18	66.67	1.090	5.873e-01	2.024	7.845e-01	1.09	6.626e-01	2.034			
≥ 351	28	23	82.14	9.109e-01	5.029e-01	1.650	7.581e-01	0.98	7.775e-01	2.850			
Quartiles													
< 175	32	27	84.38	----	----	----	----	1.14	7.173e-01	2.070	4.85e-01	4.66e-01	2.61e-01
[175,230)	35	27	77.14	1.385	8.092e-01	2.370	2.350e-01	0.84	5.941e-01	1.821			
[230,318)	33	21	63.64	8.982e-01	5.072e-01	1.590	7.126e-01	1.12	9.062e-01	3.031			
≥ 318	35	29	82.86	1.030	6.035e-01	1.759	9.127e-01	0.98	7.775e-01	1.947			
Tertiles													
< 197	46	38	82.61	----	----	----	----	1.14	8.433e-01	2.070	7.77e-01	7.70e-01	6.83e-01
[197,274)	43	31	72.09	1.180	7.333e-01	1.898	4.956e-01	0.90	6.708e-01	2.341			
≥ 274	46	35	76.09	1.028	6.442e-01	1.640	9.084e-01	0.98	7.775e-01	1.714			
Profile Likelihood													
<234.0	70	57	81.43	----	----	----	----	0.86	7.940e-01	1.396	2.09e-01	2.11e-01	2.60e-02
≥234.0	65	47	72.31	7.783e-01	5.254e-01	1.153	2.111e-01	1.25	8.378e-01	1.947			
Quantitative	135	104	77.04	1.000	9.988e-01	1.002	7.476e-01				7.494e-01	7.476e-01	

Cohort: **Derivation**

Outcome: **Progression Free Survival by DLCO (Lung Transplant is Censored)**

Predictor: **IL8 (ng / mL)**

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 0.0051	25	18	72.00	----	----	----	----	1.40	8.433e-01	2.431	2.72e-02	1.94e-02	2.23e-01
[0.0051,0.00776)	27	19	70.37	2.059	1.089	3.890	2.615e-02	1.28	8.405e-01				
[0.00776,0.00968)	28	23	82.14	7.559e-01	3.921e-01	1.457	4.034e-01	0.91	7.940e-01	2.606			
[0.00968,0.013)	27	23	85.19	1.077	5.794e-01	2.003	8.137e-01	0.86	6.708e-01	1.714			
≥ 0.013	28	21	75.00	1.479	7.956e-01	2.749	2.161e-01	0.84	3.587e-01	1.342			
Quartiles													
< 0.0056	32	23	71.88	----	----	----	----	1.40	8.405e-01	2.070	1.02e-03	9.72e-04	1.11e-02
[0.0056,0.0087)	31	23	74.19	1.867	1.092	3.194	2.253e-02	2.03	9.856e-01				
[0.0087,0.011)	29	24	82.76	6.270e-01	3.453e-01	1.139	1.251e-01	0.79	7.091e-01	2.300			
≥ 0.011	43	34	79.07	1.365	7.686e-01	2.426	2.881e-01	0.84	5.284e-01	1.123			
Tertiles													
< 0.0066	41	29	70.73	----	----	----	----	1.40	8.433e-01	2.242	4.05e-03	2.18e-03	5.14e-02
[0.0066,0.00997)	48	38	79.17	1.006	6.158e-01	1.644	9.803e-01	1.03	8.241e-01	2.519			
≥ 0.00997	46	37	80.43	2.090	1.271	3.435	3.653e-03	0.84	5.941e-01	1.123			
Profile Likelihood													
< 0.0084	60	43	71.67	----	----	----	----	1.40	1.035	2.242	2.94e-04	2.78e-04	4.14e-03
≥ 0.0084	75	61	81.33	2.093	1.395	3.142	3.618e-04	0.84	6.708e-01	1.087			
Quantitative*													
	135	104	77.04	1.026	1.009	1.043	2.346e-03				1.480e-02	1.691e-03	

*Units of pg / mL were used in **Quantitative model only**.

Cohort: Derivation
Outcome: Progression Free Survival by DLCO (Lung Transplant is Censored)
Predictor: VCAM1 (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 335	26	17	65.38	----	----	----	----	1.33	9.856e-01		4.35e-02	5.42e-02	1.75e-01
[335,402)	27	20	74.07	6.627e-01	3.425e-01	1.282	2.218e-01	2.11	1.703	4.044			
[402,457)	29	23	79.31	1.393	7.390e-01	2.626	3.054e-01	0.71	4.791e-01	1.123			
[457,572)	28	21	75.00	1.476	7.729e-01	2.819	2.381e-01	0.78	4.408e-01	1.714			
≥ 572	25	23	92.00	1.410	7.479e-01	2.657	2.883e-01	0.95	5.941e-01	1.947			
Quartiles													
< 359	34	25	73.53	----	----	----	----	1.40	9.856e-01	2.242	1.10e-02	1.26e-02	8.33e-02
[359,419)	32	22	68.75	6.487e-01	3.610e-01	1.166	1.478e-01	2.03	9.062e-01				
[419,518)	37	29	78.38	1.455	8.468e-01	2.499	1.746e-01	0.75	4.791e-01	1.123			
≥ 518	32	28	87.50	1.474	8.561e-01	2.539	1.616e-01	0.84	4.353e-01	1.473			
Tertiles													
< 378	46	31	67.39	----	----	----	----	1.40	9.856e-01	2.431	1.86e-01	1.84e-01	9.01e-01
[378,480)	45	35	77.78	1.257	7.704e-01	2.050	3.601e-01	0.84	6.626e-01	2.034			
≥ 480	44	38	86.36	1.560	9.682e-01	2.514	6.765e-02	0.86	5.941e-01	1.473			
Profile Likelihood													
< 418.0	66	47	71.21	----	----	----	----	1.40	9.856e-01	2.242	2.65e-03	2.40e-03	4.63e-02
≥ 418.0	69	57	82.61	1.823	1.230	2.702	2.774e-03	0.82	4.873e-01	1.087			
Quantitative	135	104	77.04	1.001	1.000	1.002	1.457e-02				2.299e-02	1.426e-02	

Cohort: Derivation
Outcome: Progression Free Survival by DLCO (Lung Transplant is Censored)
Predictor: S100A12 (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 15	26	20	76.92	----	----	----	----	1.71	8.433e-01	2.519	1.68e-02	5.66e-03	1.45e-02
[15,21.6)	29	21	72.41	1.290	6.958e-01	2.390	4.192e-01	0.98	8.624e-01	2.034			
[21.6,29)	26	19	73.08	1.000	5.311e-01	1.883	1.000	1.23	7.502e-01	3.031			
[29,51)	26	23	88.46	2.682	1.449	4.965	1.683e-03	0.66	4.791e-01	9.008e-01			
≥ 51	28	21	75.00	1.193	6.414e-01	2.221	5.767e-01	1.40	8.378e-01	2.664			
Quartiles													
< 17.8	34	27	79.41	----	----	----	----	1.11	8.624e-01	2.111	1.08e-01	9.52e-02	8.02e-02
[17.8,25)	34	22	64.71	8.382e-01	4.763e-01	1.475	5.403e-01	1.33	9.500e-01	2.491			
[25,45.2)	34	29	85.29	1.631	9.604e-01	2.770	7.024e-02	0.75	5.749e-01	9.856e-01			
≥ 45.2	33	26	78.79	1.198	6.947e-01	2.066	5.156e-01	1.09	6.407e-01	2.127			
Tertiles													
< 19	39	30	76.92	----	----	----	----	1.11	8.624e-01	2.111	2.25e-01	2.08e-01	5.19e-02
[19,37)	51	37	72.55	9.639e-01	5.936e-01	1.565	8.818e-01	1.12	7.502e-01	2.242			
≥ 37	45	37	82.22	1.412	8.688e-01	2.295	1.638e-01	0.84	6.407e-01	1.446			
Profile Likelihood													
< 25.5	71	51	71.83	----	----	----	----	1.34	9.774e-01	2.111	5.23e-03	4.46e-03	4.14e-04
≥ 25.5	64	53	82.81	1.747	1.183	2.580	5.007e-03	0.82	5.941e-01	1.087			
Quantitative	135	104	77.04	1.000	9.956e-01	1.005	9.905e-01				9.905e-01	9.905e-01	

Cohort: Derivation

Outcome: Progression Free Survival by CPI (Lung Transplant is Censored)

Predictor: Age (years)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 59.5	26	18	69.23	----	----	----	----	1.09	4.736e-01		9.48e-01	9.47e-01	4.28e-01
[59.5,66.1)	28	17	60.71	1.206	6.169e-01	2.356	5.845e-01	0.84	6.708e-01	2.127			
[66.1,69.7)	27	21	77.78	1.008	5.315e-01	1.913	9.795e-01	1.11	8.624e-01	2.502			
[69.7,73.9)	26	23	88.46	1.202	6.437e-01	2.245	5.634e-01	0.86	8.241e-01	2.070			
≥ 73.9	28	24	85.71	1.020	5.511e-01	1.886	9.508e-01	1.25	6.708e-01	2.606			
Quartiles													
< 61.2	33	22	66.67	----	----	----	----	1.23	4.736e-01	2.645	7.30e-01	7.32e-01	3.77e-01
[61.2,68.5)	34	25	73.53	1.150	6.448e-01	2.050	6.363e-01	0.93	8.378e-01	2.127			
[68.5,73.3)	35	27	77.14	8.532e-01	4.825e-01	1.509	5.851e-01	1.45	8.624e-01	2.491			
≥ 73.3	33	29	87.88	1.077	6.168e-01	1.881	7.940e-01	0.94	6.708e-01	2.300			
Tertiles													
< 64.7	45	31	68.89	----	----	----	----	1.09	6.708e-01	1.947	5.97e-01	5.97e-01	1.13e-01
[64.7,71.3)	45	32	71.11	8.452e-01	5.130e-01	1.393	5.092e-01	1.11	9.062e-01	2.491			
≥ 71.3	45	40	88.89	1.073	6.700e-01	1.719	7.687e-01	0.90	8.049e-01	1.703			
Profile Likelihood													
<71.3	90	63	70.00	----	----	----	----	1.09	8.624e-01	2.031	4.40e-01	4.36e-01	8.33e-02
≥71.3	45	40	88.89	1.172	7.857e-01	1.747	4.374e-01	0.90	8.049e-01	1.703			
Quantitative													
	135	103	76.30	9.939e-01	9.677e-01	1.021	6.535e-01				6.541e-01	6.535e-01	
Predictor: Gender													
Female	36	28	77.78	----	----	----	----	1.40	0.939	2.50			
Male	99	75	75.76	1.20	0.775	1.853	4.16E-01	0.93	0.824	1.45	4.10E-01	4.15E-01	

Cohort: Derivation

Outcome: Progression Free Survival by CPI (Lung Transplant is Censored)

Predictor: Baseline (4-month) FVC % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 43.3	24	17	70.83	----	----	----	----	0.79	4.025e-01	2.300	9.30e-03	1.11e-02	1.87e-02
[43.3,56.6)	24	14	58.33	5.470e-01	2.686e-01	1.114	9.641e-02	1.28	9.336e-01				
[56.6,66)	23	20	86.96	8.658e-01	4.528e-01	1.656	6.632e-01	0.84	7.091e-01	1.648			
[66,77)	22	18	81.82	7.394e-01	3.800e-01	1.439	3.740e-01	1.33	8.624e-01	2.034			
≥ 77	25	19	76.00	3.239e-01	1.605e-01	6.536e-01	1.650e-03	1.47	1.087				
Quartiles													
< 47.8	30	21	70.00	----	----	----	----	0.79	3.587e-01	2.223	7.99e-03	9.17e-03	2.81e-02
[47.8,61.1)	30	20	66.67	6.747e-01	3.639e-01	1.251	2.118e-01	0.99	8.624e-01	2.850			
[61.1,74)	28	24	85.71	9.284e-01	5.152e-01	1.673	8.048e-01	0.94	7.173e-01	1.648			
≥ 74	30	23	76.67	3.869e-01	2.066e-01	7.245e-01	3.011e-03	1.71	1.087	4.153			
Tertiles													
< 52.8	40	25	62.50	----	----	----	----	0.93	6.708e-01	2.127	1.74e-02	1.92e-02	1.16e-01
[52.8,69.9)	40	33	82.50	9.099e-01	5.394e-01	1.535	7.233e-01	0.91	7.173e-01	1.648			
≥ 69.9	38	30	78.95	4.916e-01	2.809e-01	8.602e-01	1.286e-02	1.45	1.112	2.645			
Profile Likelihood													
< 76.9	93	69	74.19	----	----	----	----	0.94	8.378e-01	1.402	1.35e-03	2.27e-03	1.40e-02
≥ 76.9	25	19	76.00	4.272e-01	2.438e-01	7.485e-01	2.957e-03	1.47	1.087				
Quantitative	118	88	74.58	9.878e-01	9.764e-01	9.994e-01	3.861e-02				3.710e-02	3.842e-02	

Cohort: Derivation
Outcome: Progression Free Survival by CPI (Lung Transplant is Censored)
Predictor: Baseline (4-month) DLco % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 28.9	21	15	71.43	----	----	----	----	0.90	4.025e-01		4.16e-02	2.74e-02	7.75e-01
[28.9,39)	22	15	68.18	5.949e-01	2.875e-01	1.231	1.614e-01	1.28	8.241e-01				
[39,49.4)	21	18	85.71	5.575e-01	2.782e-01	1.117	9.940e-02	0.98	7.091e-01	2.341			
[49.4,60)	20	16	80.00	3.934e-01	1.898e-01	8.156e-01	1.214e-02	1.33	8.624e-01				
≥ 60	22	17	77.27	3.221e-01	1.525e-01	6.803e-01	2.981e-03	1.47	8.433e-01				
Quartiles													
< 31.6	26	20	76.92	----	----	----	----	0.91	8.241e-01	1.714	3.02e-02	2.52e-02	7.41e-01
[31.6,43.8)	27	19	70.37	9.716e-01	5.175e-01	1.824	9.285e-01	0.93	6.407e-01	2.078			
[43.8,57)	25	21	84.00	5.385e-01	2.889e-01	1.004	5.139e-02	1.70	8.624e-01	2.519			
≥ 57	28	21	75.00	4.542e-01	2.390e-01	8.632e-01	1.600e-02	1.47	1.035	4.153			
Tertiles													
< 36.6	35	24	68.57	----	----	----	----	0.91	6.708e-01	1.714	5.15e-02	4.50e-02	8.65e-01
[36.6,53.4)	37	31	83.78	6.818e-01	3.990e-01	1.165	1.611e-01	1.23	8.624e-01	2.034			
≥ 53.4	34	26	76.47	4.859e-01	2.727e-01	8.656e-01	1.428e-02	1.47	8.433e-01	2.850			
Profile Likelihood													
<42.7	53	39	73.58	----	----	----	----	0.93	8.241e-01	1.396	3.29e-03	2.54e-03	2.97e-01
≥42.7	53	42	79.25	5.026e-01	3.186e-01	7.928e-01	3.090e-03	1.60	1.112	2.491			
Quantitative													
	106	81	76.42	9.793e-01	9.654e-01	9.935e-01	4.427e-03				4.185e-03	4.228e-03	

Cohort: Derivation

Outcome: Progression Free Survival by CPI (Lung Transplant is Censored)

Predictor: Baseline (4-month) CPI

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 43	22	17	77.27	----	----	----	----	1.47	1.035		7.29e-02	6.07e-02	8.17e-01
[43,50.8)	20	17	85.00	1.133	5.708e-01	2.248	7.213e-01	1.65	8.624e-01	3.261			
[50.8,58.7)	21	17	80.95	1.720	8.549e-01	3.459	1.285e-01	1.25	8.624e-01	2.502			
[58.7,64.5)	22	14	63.64	1.923	9.240e-01	4.002	8.033e-02	0.93	6.708e-01	2.606			
≥ 64.5	21	16	76.19	2.513	1.238	5.100	1.072e-02	0.90	3.313e-01	2.223			
Quartiles													
< 44.4	25	20	80.00	----	----	----	----	1.47	1.035	2.645	4.84e-02	3.31e-02	7.92e-01
[44.4,56)	27	22	81.48	1.089	5.873e-01	2.018	7.875e-01	1.25	8.624e-01	2.850			
[56,62.7)	27	21	77.78	1.602	8.499e-01	3.021	1.451e-01	0.99	9.336e-01	2.031			
≥ 62.7	27	18	66.67	2.372	1.228	4.583	1.015e-02	0.84	3.313e-01	2.223			
Tertiles													
< 47.7	34	27	79.41	----	----	----	----	1.47	1.035	2.491	4.47e-02	3.74e-02	9.23e-01
[47.7,59.8)	37	30	81.08	1.381	8.045e-01	2.369	2.417e-01	1.25	8.624e-01	2.034			
≥ 59.8	35	24	68.57	2.093	1.177	3.724	1.195e-02	0.90	7.091e-01	2.031			
Profile Likelihood													
<56.2	54	43	79.63	----	----	----	----	1.60	1.112	2.341	4.01e-03	3.10e-03	2.01e-01
≥56.2	52	38	73.08	1.966	1.246	3.102	3.693e-03	0.93	8.241e-01	1.402			
Quantitative	106	81	76.42	1.026	1.007	1.045	8.395e-03				7.926e-03	8.375e-03	

Cohort: **Derivation**

Outcome: **Progression Free Survival by CPI (Lung Transplant is Censored)**

Predictor: **Baseline (3-month) FVC % Predicted**

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 43.1	22	15	68.18	----	----	----	----	0.67	3.313e-01		2.66e-02	3.66e-02	9.92e-02
[43.1,56.5)	21	11	52.38	6.731e-01	3.067e-01	1.477	3.236e-01	1.03	9.008e-01				
[56.5,65.7)	22	19	86.36	8.891e-01	4.507e-01	1.754	7.346e-01	0.86	6.626e-01	2.031			
[65.7,76.7)	19	16	84.21	8.084e-01	3.984e-01	1.640	5.556e-01	1.33	8.624e-01	2.034			
≥ 76.7	22	16	72.73	3.451e-01	1.637e-01	7.275e-01	5.172e-03	1.47	1.087				
Quartiles													
< 47.8	27	18	66.67	----	----	----	----	0.67	3.313e-01	2.300	1.41e-02	1.76e-02	7.37e-02
[47.8,60.5)	27	17	62.96	7.264e-01	3.717e-01	1.419	3.497e-01	0.99	8.624e-01				
[60.5,73.4)	27	23	85.19	9.229e-01	4.962e-01	1.717	8.000e-01	0.91	7.091e-01	1.648			
≥ 73.4	25	19	76.00	3.823e-01	1.940e-01	7.534e-01	5.465e-03	1.95	1.087				
Tertiles													
< 52.4	36	21	58.33	----	----	----	----	1.03	5.010e-01	2.223	2.42e-02	2.64e-02	2.29e-01
[52.4,69.6)	36	29	80.56	1.017	5.785e-01	1.789	9.529e-01	0.86	6.626e-01	1.235			
≥ 69.6	34	27	79.41	5.180e-01	2.857e-01	9.392e-01	3.025e-02	1.47	1.144	2.645			
Profile Likelihood													
< 76.3	83	60	72.29	----	----	----	----	0.93	8.049e-01	1.333	1.05e-03	1.76e-03	1.15e-02
≥ 76.3	23	17	73.91	4.044e-01	2.256e-01	7.248e-01	2.358e-03	2.07	1.087				
Quantitative	106	77	72.64	9.871e-01	9.753e-01	9.991e-01	3.502e-02				3.383e-02	3.485e-02	

Cohort: Derivation

Outcome: Progression Free Survival by CPI (Lung Transplant is Censored)

Predictor: Baseline (3-month) DLco % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 28.6	18	13	72.22	----	----	----	----	0.91	2.300e-01		6.31e-02	4.85e-02	7.94e-01
[28.6,38)	18	11	61.11	5.432e-01	2.388e-01	1.236	1.455e-01	1.40	3.313e-01				
[38,49.9)	20	17	85.00	5.624e-01	2.718e-01	1.164	1.209e-01	0.99	8.624e-01	2.078			
[49.9,61)	18	15	83.33	4.871e-01	2.292e-01	1.035	6.145e-02	1.25	8.624e-01	2.645			
≥ 61	20	15	75.00	2.968e-01	1.334e-01	6.602e-01	2.903e-03	1.47	4.983e-01				
Quartiles													
< 31.4	23	17	73.91	----	----	----	----	0.94	6.708e-01	2.127	2.18e-02	2.34e-02	4.93e-01
[31.4,41.3)	24	17	70.83	1.154	5.873e-01	2.269	6.770e-01	0.93	6.407e-01	2.031			
[41.3,57.2)	23	20	86.96	7.280e-01	3.802e-01	1.394	3.380e-01	1.25	8.049e-01	2.034			
≥ 57.2	24	17	70.83	4.186e-01	2.064e-01	8.490e-01	1.579e-02	1.74	8.433e-01				
Tertiles													
< 34.5	31	21	67.74	----	----	----	----	0.94	4.025e-01	2.127	7.14e-02	7.43e-02	6.06e-01
[34.5,54.3)	32	26	81.25	8.383e-01	4.704e-01	1.494	5.496e-01	1.09	8.624e-01	1.947			
≥ 54.3	31	24	77.42	5.104e-01	2.776e-01	9.384e-01	3.042e-02	1.47	8.049e-01	3.261			
Profile Likelihood													
<42.7	48	35	72.92	----	----	----	----	0.93	6.708e-01	1.284	4.77e-03	3.82e-03	2.98e-01
≥42.7	46	36	78.26	4.962e-01	3.058e-01	8.052e-01	4.548e-03	1.60	1.035	2.491			
Quantitative													
	94	71	75.53	9.802e-01	9.660e-01	9.946e-01	7.305e-03				7.074e-03	6.879e-03	

Cohort: Derivation
Outcome: Progression Free Survival by CPI (Lung Transplant is Censored)
Predictor: Baseline (3-month) CPI

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 42.8	19	14	73.68	----	----	----	----	1.74	4.983e-01		1.30e-01	1.35e-01	9.46e-01
[42.8,51.5)	18	16	88.89	1.439	6.893e-01	3.003	3.325e-01	1.14	8.624e-01	2.645			
[51.5,59)	19	15	78.95	1.939	9.055e-01	4.154	8.830e-02	1.23	8.624e-01	2.502			
[59,65.1)	19	12	63.16	2.307	1.031	5.161	4.189e-02	0.71	6.407e-01				
≥ 65.1	19	14	73.68	2.421	1.122	5.222	2.423e-02	0.91	2.300e-01				
Quartiles													
< 44.3	23	18	78.26	----	----	----	----	1.47	8.049e-01		4.33e-02	3.73e-02	6.29e-01
[44.3,56.1)	24	19	79.17	1.237	6.415e-01	2.387	5.252e-01	1.60	8.624e-01	2.519			
[56.1,62.8)	24	19	79.17	2.214	1.126	4.354	2.128e-02	0.93	6.708e-01	1.446			
≥ 62.8	23	15	65.22	2.251	1.111	4.560	2.428e-02	0.91	3.313e-01				
Tertiles													
< 47.6	31	24	77.42	----	----	----	----	1.47	1.035	2.645	4.64e-02	4.40e-02	9.02e-01
[47.6,59.9)	32	27	84.38	1.572	8.917e-01	2.770	1.179e-01	0.99	8.624e-01	1.596			
≥ 59.9	31	20	64.52	2.150	1.161	3.981	1.490e-02	0.91	4.025e-01	2.127			
Profile Likelihood													
<56.1	47	37	78.72	----	----	----	----	1.47	1.087	2.078	5.44e-03	4.32e-03	2.11e-01
≥56.1	47	34	72.34	2.000	1.232	3.247	5.063e-03	0.91	6.708e-01	1.402			
Quantitative	94	71	75.53	1.025	1.006	1.045	1.174e-02				1.134e-02	1.155e-02	

Cohort: Derivation
Outcome: Progression Free Survival by CPI (Lung Transplant is Censored)
Predictor: MMP7 (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 2.7	26	20	76.92	----	----	----	----	1.33	4.873e-01	2.431	6.49e-01	6.25e-01	5.44e-01
[2.7,3.76)	23	18	78.26	7.708e-01	4.065e-01	1.462	4.254e-01	1.47	8.433e-01				
[3.76,4.99)	27	18	66.67	8.481e-01	4.414e-01	1.629	6.209e-01	1.03	8.049e-01	2.519			
[4.99,6.41)	26	22	84.62	1.212	6.603e-01	2.224	5.350e-01	0.94	3.751e-01	2.031			
≥ 6.41	26	20	76.92	8.503e-01	4.556e-01	1.587	6.103e-01	0.95	8.378e-01	2.932			
Quartiles													
< 2.92	32	25	78.12	----	----	----	----	1.40	8.433e-01	2.431	5.64e-01	5.74e-01	5.69e-01
[2.92,4.3)	30	21	70.00	7.823e-01	4.328e-01	1.414	4.163e-01	1.03	8.049e-01				
[4.3,5.73)	33	25	75.76	1.194	6.844e-01	2.084	5.320e-01	0.86	5.284e-01	2.034			
≥ 5.73	33	27	81.82	1.021	5.910e-01	1.764	9.409e-01	0.98	8.378e-01	2.502			
Tertiles													
< 3.51	43	32	74.42	----	----	----	----	1.47	8.624e-01	2.431	5.96e-01	6.01e-01	4.99e-01
[3.51,5.35)	42	30	71.43	1.263	7.601e-01	2.098	3.677e-01	0.91	6.708e-01	1.402			
≥ 5.35	43	36	83.72	1.228	7.618e-01	1.979	3.992e-01	0.98	8.378e-01	2.034			
Profile Likelihood													
< 4.1	54	40	74.07	----	----	----	----	1.40	8.624e-01	2.341	1.45e-01	1.48e-01	6.65e-02
≥ 4.1	74	58	78.38	1.350	8.988e-01	2.027	1.483e-01	0.94	8.241e-01	1.446			
Quantitative	128	98	76.56	1.009	0.9424	1.081	7.889e-01				7.899e-01	7.889e-01	

Cohort: Derivation

Outcome: Progression Free Survival by CPI (Lung Transplant is Censored)

Predictor: ICAM1 (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 158	27	23	85.19	----	----	----	----	1.13	5.010e-01	2.070	7.64e-01	7.60e-01	2.36e-01
[158,205)	26	19	73.08	9.227e-01	5.010e-01	1.699	7.962e-01	0.86	8.433e-01	2.300			
[205,252)	27	19	70.37	9.201e-01	5.002e-01	1.693	7.889e-01	1.60	6.708e-01	3.031			
[252,351)	27	19	70.37	1.179	6.400e-01	2.172	5.971e-01	0.95	6.626e-01	2.034			
≥ 351	28	23	82.14	7.692e-01	4.237e-01	1.396	3.884e-01	1.40	8.350e-01	2.932			
Quartiles													
< 175	32	27	84.38	----	----	----	----	1.11	7.091e-01	2.070	7.34e-01	7.32e-01	3.13e-01
[175,230)	35	26	74.29	1.181	6.876e-01	2.029	5.462e-01	0.86	7.940e-01	2.127			
[230,318)	33	21	63.64	8.785e-01	4.963e-01	1.555	6.565e-01	1.33	9.062e-01	3.031			
≥ 318	35	29	82.86	9.061e-01	5.304e-01	1.548	7.180e-01	0.98	8.350e-01	2.034			
Tertiles													
< 197	46	37	80.43	----	----	----	----	1.11	8.433e-01	1.744	8.08e-01	8.09e-01	5.86e-01
[197,274)	43	31	72.09	1.112	6.897e-01	1.794	6.622e-01	1.03	7.502e-01	2.491			
≥ 274	46	35	76.09	9.456e-01	5.910e-01	1.513	8.155e-01	0.98	8.350e-01	2.031			
Profile Likelihood													
<232.5	69	55	79.71	----	----	----	----	0.90	7.940e-01	1.446	2.07e-01	2.09e-01	4.19e-02
≥232.5	66	48	72.73	7.767e-01	5.240e-01	1.151	2.081e-01	1.33	9.062e-01	2.034			
Quantitative	135	103	76.30	1.000	9.987e-01	1.002	8.974e-01				8.977e-01	8.974e-01	

Cohort: **Derivation**

Outcome: **Progression Free Survival by CPI (Lung Transplant is Censored)**

Predictor: **IL8 (ng / mL)**

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 0.0051	25	17	68.00	----	----	----	----	1.40	8.433e-01	2.431	1.63e-01	1.42e-01	5.57e-01
[0.0051,0.00776)	27	20	74.07	1.753	9.131e-01	3.366	9.165e-02	1.31	9.500e-01				
[0.00776,0.00968)	28	23	82.14	8.186e-01	4.241e-01	1.580	5.509e-01	0.91	7.940e-01	2.645			
[0.00968,0.013)	27	23	85.19	1.021	5.435e-01	1.919	9.480e-01	0.86	7.091e-01	2.223			
≥ 0.013	28	20	71.43	1.349	7.185e-01	2.534	3.514e-01	0.90	3.587e-01	2.031			
Quartiles													
< 0.0056	32	22	68.75	----	----	----	----	1.40	8.433e-01	2.070	4.96e-03	5.12e-03	2.80e-02
[0.0056,0.0087)	31	24	77.42	1.714	9.926e-01	2.960	5.320e-02	2.03	9.856e-01	4.153			
[0.0087,0.011)	29	24	82.76	6.444e-01	3.550e-01	1.170	1.487e-01	0.84	7.091e-01	2.341			
≥ 0.011	43	33	76.74	1.271	7.096e-01	2.277	4.199e-01	0.86	6.407e-01	1.596			
Tertiles													
< 0.0066	41	29	70.73	----	----	----	----	1.40	1.112	2.070	2.63e-02	2.01e-02	1.40e-01
[0.0066,0.00997)	48	38	79.17	9.044e-01	5.525e-01	1.480	6.893e-01	1.03	8.241e-01	2.606			
≥ 0.00997	46	36	78.26	1.704	1.038	2.797	3.504e-02	0.86	6.708e-01	1.703			
Profile Likelihood													
< 0.0084	60	43	71.67	----	----	----	----	1.40	1.112	2.431	1.32e-03	1.36e-03	9.69e-03
≥ 0.0084	75	60	80.00	1.937	1.286	2.919	1.567e-03	0.86	7.173e-01	1.144			
Quantitative*	135	103	76.30	1.023	1.004	1.042	1.539e-02				4.522e-02	1.432e-02	

*Units of pg / mL were used in **Quantitative model only**.

Cohort: Derivation
Outcome: Progression Free Survival by CPI (Lung Transplant is Censored)
Predictor: VCAM1 (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 335	26	16	61.54	----	----	----	----	1.33	9.856e-01		1.01e-01	1.16e-01	2.76e-01
[335,402)	27	21	77.78	7.216e-01	3.713e-01	1.402	3.356e-01	2.08	1.648	4.044			
[402,457)	29	22	75.86	1.426	7.430e-01	2.736	2.860e-01	0.67	4.791e-01	1.284			
[457,572)	28	21	75.00	1.428	7.393e-01	2.758	2.889e-01	0.86	4.791e-01	2.223			
≥ 572	25	23	92.00	1.384	7.248e-01	2.642	3.248e-01	0.95	8.350e-01	2.127			
Quartiles													
< 359	34	24	70.59	----	----	----	----	1.40	9.856e-01	2.491	4.90e-02	5.36e-02	2.24e-01
[359,419)	32	23	71.88	7.013e-01	3.902e-01	1.261	2.356e-01	1.40	8.624e-01	4.085			
[419,518)	37	28	75.68	1.372	7.909e-01	2.378	2.607e-01	0.75	4.791e-01	1.596			
≥ 518	32	28	87.50	1.403	8.093e-01	2.431	2.278e-01	0.93	6.708e-01	1.947			
Tertiles													
< 378	46	31	67.39	----	----	----	----	1.40	9.856e-01	2.431	3.85e-01	3.84e-01	8.99e-01
[378,480)	45	34	75.56	1.150	7.002e-01	1.889	5.808e-01	0.75	5.749e-01	2.034			
≥ 480	44	38	86.36	1.397	8.661e-01	2.252	1.706e-01	0.94	8.350e-01	1.947			
Profile Likelihood													
< 399.5	53	37	69.81	----	----	----	----	1.74	1.333	2.502	8.92e-03	9.76e-03	1.06e-01
≥ 399.5	82	66	80.49	1.714	1.134	2.590	1.051e-02	0.84	6.708e-01	1.087			
Quantitative	135	103	76.30	1.001	1.000	1.002	1.987e-02				2.948e-02	1.964e-02	

Cohort: **Derivation**

Outcome: **Progression Free Survival by CPI (Lung Transplant is Censored)**

Predictor: **S100A12 (ng / mL)**

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 15	26	20	76.92	----	----	----	----	1.71	8.433e-01		1.41e-02	4.09e-03	1.21e-02
[15,21.6)	29	20	68.97	1.253	6.704e-01	2.343	4.793e-01	0.98	8.624e-01	2.491			
[21.6,29)	26	20	76.92	1.061	5.684e-01	1.981	8.525e-01	1.65	9.062e-01	2.645			
[29,51)	26	22	84.62	2.883	1.535	5.416	9.960e-04	0.66	4.983e-01	9.336e-01			
≥ 51	28	21	75.00	1.239	6.653e-01	2.309	4.991e-01	1.40	8.378e-01	2.664			
Quartiles													
< 17.8	34	27	79.41	----	----	----	----	1.11	8.624e-01	2.502	3.80e-02	2.92e-02	3.16e-02
[17.8,25)	34	21	61.76	8.152e-01	4.600e-01	1.445	4.841e-01	1.65	9.774e-01	3.031			
[25,45.2)	34	30	88.24	1.800	1.062	3.048	2.889e-02	0.79	5.749e-01	9.856e-01			
≥ 45.2	33	25	75.76	1.197	6.895e-01	2.077	5.232e-01	1.28	8.378e-01	2.606			
Tertiles													
< 19	39	30	76.92	----	----	----	----	1.11	8.624e-01	2.341	1.99e-01	1.82e-01	4.78e-02
[19,37)	51	37	72.55	9.762e-01	6.020e-01	1.583	9.224e-01	1.25	9.062e-01	2.223			
≥ 37	45	36	80.00	1.451	8.888e-01	2.368	1.366e-01	0.84	6.407e-01	1.396			
Profile Likelihood													
< 25.5	71	51	71.83	----	----	----	----	1.65	1.035	2.223	7.47e-03	6.55e-03	1.05e-03
≥ 25.5	64	52	81.25	1.713	1.157	2.536	7.160e-03	0.84	6.407e-01	1.246			
Quantitative	135	103	76.30	1.000	9.958e-01	1.005	9.217e-01				9.222e-01	9.217e-01	

Cohort: Derivation

Outcome: Progression Free Survival by FVC (Lung Transplant counts as event)

Predictor: Age (years)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN Pvalue
Quintiles													
< 59.5	26	25	96.15	----	----	----	----	1.06	4.408e-01	1.925	8.39e-01	8.39e-01	8.25e-01
[59.5,66.1)	28	23	82.14	9.840e-01	5.562e-01	1.741	9.558e-01	0.41	3.532e-01	1.947			
[66.1,69.7)	27	24	88.89	9.023e-01	5.142e-01	1.584	7.202e-01	0.86	6.324e-01	2.034			
[69.7,73.9)	26	25	96.15	8.263e-01	4.730e-01	1.444	5.027e-01	0.93	8.049e-01	2.231			
≥ 73.9	28	25	89.29	7.502e-01	4.294e-01	1.311	3.128e-01	0.94	6.133e-01	2.606			
Quartiles													
< 61.2	33	30	90.91	----	----	----	----	1.03	5.010e-01	1.925	3.32e-01	3.30e-01	5.32e-01
[61.2,68.5)	34	30	88.24	1.058	6.355e-01	1.760	8.292e-01	0.54	3.587e-01	9.774e-01			
[68.5,73.3)	35	32	91.43	6.982e-01	4.229e-01	1.153	1.602e-01	1.31	8.624e-01	2.231			
≥ 73.3	33	30	90.91	8.086e-01	4.860e-01	1.345	4.135e-01	0.90	6.133e-01	2.300			
Tertiles													
< 64.7	45	39	86.67	----	----	----	----	0.86	5.010e-01	1.717	8.71e-01	8.74e-01	5.90e-03
[64.7,71.3)	45	41	91.11	1.068	6.882e-01	1.658	7.690e-01	0.86	5.284e-01	1.402			
≥ 71.3	45	42	93.33	9.515e-01	6.135e-01	1.476	8.242e-01	0.90	7.392e-01	1.714			
Profile Likelihood													
<67.9	64	58	90.62	----	----	----	----	0.67	4.079e-01	1.087	5.99e-02	5.72e-02	2.47e-01
≥67.9	71	64	90.14	7.083e-01	4.955e-01	1.013	5.857e-02	0.96	8.624e-01	1.714			
Quantitative													
	135	122	90.37	9.820e-01	9.590e-01	1.006	1.336e-01				1.352e-01	1.331e-01	
Predictor: Gender													
Female	36	30	83.33	----	----	----	----	1.31	0.778	1.92			
Male	99	92	92.93	1.29	0.852	1.954	2.29E-01	0.84	0.701	1.05	2.20E-01	2.27E-01	

Cohort: **Derivation**

Outcome: **Progression Free Survival by FVC (Lung Transplant counts as event)**

Predictor: **Baseline (4-month) FVC % Predicted**

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN Pvalue
Quintiles													
< 43.3	24	23	95.83	----	----	----	----	0.33	1.533e-01	8.378e-01	9.88e-06	1.25e-05	3.84e-02
[43.3,56.6)	24	22	91.67	5.288e-01	2.928e-01	9.548e-01	3.457e-02	0.76	4.081e-01	2.086			
[56.6,66)	23	19	82.61	5.030e-01	2.709e-01	9.339e-01	2.951e-02	0.72	4.983e-01	1.311			
[66,77)	22	21	95.45	6.322e-01	3.488e-01	1.146	1.306e-01	0.86	5.749e-01	1.402			
≥ 77	25	21	84.00	1.889e-01	9.781e-02	3.649e-01	6.970e-07	2.23	1.273	4.153			
Quartiles													
< 47.8	30	29	96.67	----	----	----	----	0.34	2.300e-01	7.940e-01	1.69e-05	1.04e-05	8.11e-02
[47.8,61.1)	30	27	90.00	5.619e-01	3.310e-01	9.538e-01	3.273e-02	0.82	4.873e-01	1.925			
[61.1,74)	28	24	85.71	5.072e-01	2.920e-01	8.811e-01	1.597e-02	0.91	6.133e-01	1.402			
≥ 74	30	26	86.67	2.365e-01	1.321e-01	4.233e-01	1.211e-06	1.97	1.112	4.044			
Tertiles													
< 52.8	40	38	95.00	----	----	----	----	0.41	3.258e-01	8.378e-01	4.28e-05	2.79e-05	3.57e-01
[52.8,69.9)	40	34	85.00	6.042e-01	3.780e-01	9.658e-01	3.524e-02	0.86	6.133e-01	1.311			
≥ 69.9	38	34	89.47	3.226e-01	1.955e-01	5.324e-01	9.585e-06	1.40	1.112	2.970			
Profile Likelihood													
< 76.9	93	85	91.40	----	----	----	----	0.71	5.010e-01	9.008e-01	1.92e-06	7.05e-06	1.60e-02
≥ 76.9	25	21	84.00	3.103e-01	1.821e-01	5.290e-01	1.702e-05	2.23	1.273	4.153			
Quantitative	118	106	89.83	9.774e-01	9.671e-01	9.879e-01	2.565e-05				1.703e-05	2.371e-05	

Cohort: **Derivation**

Outcome: **Progression Free Survival by FVC (Lung Transplant counts as event)**

Predictor: **Baseline (4-month) DLco % Predicted**

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 28.9	21	20	95.24	----	----	----	----	0.58	9.035e-02	9.500e-01	2.02e-06	1.61e-06	2.14e-01
[28.9,39)	22	20	90.91	9.643e-01	5.166e-01	1.800	9.091e-01	0.41	2.683e-01	1.112			
[39,49.4)	21	19	90.48	5.082e-01	2.698e-01	9.574e-01	3.618e-02	0.98	6.708e-01	2.078			
[49.4,60)	20	18	90.00	3.957e-01	2.050e-01	7.636e-01	5.711e-03	1.14	8.049e-01	2.086			
≥ 60	22	17	77.27	1.737e-01	8.361e-02	3.608e-01	2.687e-06	2.53	1.273				
Quartiles													
< 31.6	26	25	96.15	----	----	----	----	0.80	2.300e-01	9.582e-01	2.39e-06	1.37e-06	1.06e-01
[31.6,43.8)	27	25	92.59	1.176	6.733e-01	2.053	5.692e-01	0.41	2.930e-01	1.087			
[43.8,57)	25	22	88.00	4.637e-01	2.584e-01	8.322e-01	1.001e-02	1.34	8.049e-01	2.086			
≥ 57	28	22	78.57	2.635e-01	1.407e-01	4.933e-01	3.075e-05	2.36	1.144	4.616			
Tertiles													
< 36.6	35	33	94.29	----	----	----	----	0.41	2.546e-01	9.008e-01	1.00e-05	2.97e-06	9.73e-01
[36.6,53.4)	37	33	89.19	4.825e-01	2.955e-01	7.878e-01	3.577e-03	1.10	7.392e-01	1.717			
≥ 53.4	34	28	82.35	2.631e-01	1.521e-01	4.552e-01	1.802e-06	1.99	1.112	3.261			
Profile Likelihood													
<43.9	54	51	94.44	----	----	----	----	0.63	3.751e-01	9.062e-01	2.13e-07	7.51e-08	8.42e-02
≥43.9	52	43	82.69	3.119e-01	1.998e-01	4.868e-01	2.909e-07	1.92	1.144	2.491			
Quantitative													
	106	94	88.68	9.662e-01	9.534e-01	9.791e-01	3.859e-07				2.972e-07	2.564e-07	

Cohort: Derivation
Outcome: Progression Free Survival by FVC (Lung Transplant counts as event)
Predictor: Baseline (4-month) CPI

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 43	22	18	81.82	----	----	----	----	2.36	1.333	5.202	1.72e-06	4.22e-07	4.80e-01
[43,50.8)	20	17	85.00	1.513	7.542e-01	3.035	2.437e-01	1.14	9.199e-01	4.044			
[50.8,58.7)	21	19	90.48	2.680	1.328	5.407	5.922e-03	1.11	6.133e-01	2.012			
[58.7,64.5)	22	20	90.91	4.164	2.075	8.353	5.939e-05	0.67	2.930e-01	9.582e-01			
≥ 64.5	21	20	95.24	5.973	2.934	1.216e+01	8.271e-07	0.33	8.761e-02	9.062e-01			
Quartiles													
< 44.4	25	20	80.00	----	----	----	----	2.36	1.273	4.616	2.15e-07	1.04e-08	1.67e-01
[44.4,56)	27	24	88.89	1.848	9.904e-01	3.450	5.363e-02	1.09	7.392e-01	2.034			
[56,62.7)	27	24	88.89	2.760	1.452	5.246	1.939e-03	0.96	6.708e-01	1.572			
≥ 62.7	27	26	96.30	6.628	3.440	1.277e+01	1.591e-08	0.33	1.477e-01	8.241e-01			
Tertiles													
< 47.7	34	28	82.35	----	----	----	----	1.99	1.273	3.274	1.50e-07	1.43e-08	1.57e-01
[47.7,59.8)	37	32	86.49	1.948	1.142	3.324	1.438e-02	1.11	7.173e-01	1.925			
≥ 59.8	35	34	97.14	4.858	2.786	8.470	2.513e-08	0.38	2.546e-01	8.241e-01			
Profile Likelihood													
<60.3	74	63	85.14	----	----	----	----	1.33	1.087	2.012	5.40e-08	5.09e-10	2.22e-02
≥60.3	32	31	96.88	4.079	2.536	6.562	6.761e-09	0.33	2.300e-01	7.775e-01			
Quantitative	106	94	88.68	1.049	1.030	1.067	1.056e-07				8.159e-08	1.003e-07	

Cohort: Derivation
Outcome: Progression Free Survival by FVC (Lung Transplant counts as event)
Predictor: Baseline (3-month) FVC % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 43.1	22	21	95.45	----	----	----	----	0.28	1.477e-01	8.598e-01	3.11e-05	4.57e-05	1.28e-01
[43.1,56.5)	21	19	90.48	6.086e-01	3.256e-01	1.138	1.197e-01	0.70	3.587e-01	2.012			
[56.5,65.7)	22	18	81.82	4.950e-01	2.610e-01	9.389e-01	3.131e-02	0.72	3.751e-01	1.925			
[65.7,76.7)	19	18	94.74	6.164e-01	3.273e-01	1.161	1.341e-01	0.86	4.791e-01	1.947			
≥ 76.7	22	18	81.82	1.865e-01	9.248e-02	3.762e-01	2.717e-06	2.23	1.273	5.202			
Quartiles													
< 47.8	27	26	96.30	----	----	----	----	0.33	1.697e-01	6.708e-01	9.76e-06	6.00e-06	4.76e-02
[47.8,60.5)	27	24	88.89	5.485e-01	3.132e-01	9.605e-01	3.565e-02	0.74	4.081e-01	1.717			
[60.5,73.4)	27	23	85.19	4.607e-01	2.592e-01	8.190e-01	8.281e-03	0.86	5.749e-01	1.402			
≥ 73.4	25	21	84.00	2.006e-01	1.057e-01	3.808e-01	8.925e-07	2.08	1.144	4.616			
Tertiles													
< 52.4	36	34	94.44	----	----	----	----	0.33	2.300e-01	7.392e-01	5.18e-05	2.90e-05	4.59e-01
[52.4,69.6)	36	30	83.33	5.666e-01	3.445e-01	9.319e-01	2.525e-02	0.86	4.983e-01	1.311			
≥ 69.6	34	30	88.24	3.021e-01	1.773e-01	5.146e-01	1.062e-05	1.67	1.144	3.031			
Profile Likelihood													
< 76.7	84	76	90.48	----	----	----	----	0.63	4.517e-01	9.008e-01	4.18e-06	1.50e-05	3.03e-02
≥ 76.7	22	18	81.82	2.965e-01	1.664e-01	5.282e-01	3.682e-05	2.23	1.273	5.202			
Quantitative	106	94	88.68	9.760e-01	9.652e-01	9.870e-01	2.027e-05				1.378e-05	1.902e-05	

Cohort: Derivation

Outcome: Progression Free Survival by FVC (Lung Transplant counts as event)

Predictor: Baseline (3-month) DLco % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 28.6	18	18	100.00	----	----	----	----	0.31	8.761e-02	9.500e-01	2.61e-06	1.70e-06	1.33e-01
[28.6,38)	18	15	83.33	9.860e-01	4.926e-01	1.974	9.683e-01	0.33	1.834e-01	1.402			
[38,49.9)	20	18	90.00	5.090e-01	2.639e-01	9.818e-01	4.393e-02	0.98	6.708e-01	1.925			
[49.9,61)	18	16	88.89	3.911e-01	1.967e-01	7.777e-01	7.436e-03	1.14	7.173e-01	2.357			
≥ 61	20	15	75.00	1.534e-01	6.990e-02	3.365e-01	2.908e-06	3.10	1.273				
Quartiles													
< 31.4	23	22	95.65	----	----	----	----	0.67	1.697e-01	1.402	1.19e-06	1.08e-06	5.22e-02
[31.4,41.3)	24	22	91.67	1.353	7.425e-01	2.464	3.235e-01	0.41	2.683e-01	9.774e-01			
[41.3,57.2)	23	20	86.96	5.453e-01	2.953e-01	1.007	5.256e-02	1.14	6.708e-01	2.012			
≥ 57.2	24	18	75.00	2.275e-01	1.136e-01	4.557e-01	2.957e-05	2.53	1.273				
Tertiles													
< 34.5	31	29	93.55	----	----	----	----	0.38	2.300e-01	9.062e-01	2.13e-05	1.32e-05	8.23e-01
[34.5,54.3)	32	28	87.50	5.835e-01	3.458e-01	9.846e-01	4.358e-02	0.86	6.133e-01	1.717			
≥ 54.3	31	25	80.65	2.585e-01	1.439e-01	4.642e-01	5.937e-06	2.36	1.054	3.274			
Profile Likelihood													
<43.9	49	46	93.88	----	----	----	----	0.45	2.930e-01	9.008e-01	2.94e-07	1.16e-07	9.13e-02
≥43.9	45	36	80.00	2.883e-01	1.775e-01	4.683e-01	5.039e-07	1.95	1.144	3.105			
Quantitative													
	94	82	87.23	9.655e-01	9.522e-01	9.790e-01	6.947e-07				5.349e-07	3.905e-07	

Cohort: Derivation
Outcome: Progression Free Survival by FVC (Lung Transplant counts as event)
Predictor: Baseline (3-month) CPI

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 42.8	19	15	78.95	----	----	----	----	2.36	1.333		2.38e-06	8.22e-07	5.00e-01
[42.8,51.5)	18	15	83.33	1.656	7.726e-01	3.551	1.947e-01	1.14	8.624e-01				
[51.5,59)	19	16	84.21	2.960	1.354	6.472	6.560e-03	1.11	4.517e-01	2.012			
[59,65.1)	19	18	94.74	5.285	2.439	1.145e+01	2.453e-05	0.54	2.683e-01	9.500e-01			
≥ 65.1	19	18	94.74	6.365	2.921	1.387e+01	3.212e-06	0.33	8.761e-02	9.391e-01			
Quartiles													
< 44.3	23	19	82.61	----	----	----	----	2.36	1.273	4.616	1.10e-06	1.29e-07	4.76e-01
[44.3,56.1)	24	19	79.17	1.591	8.155e-01	3.104	1.733e-01	1.17	7.173e-01	3.261			
[56.1,62.8)	24	22	91.67	3.336	1.697	6.558	4.751e-04	0.67	5.010e-01	1.342			
≥ 62.8	23	22	95.65	6.049	3.038	1.204e+01	3.022e-07	0.23	9.035e-02	9.008e-01			
Tertiles													
< 47.6	31	25	80.65	----	----	----	----	2.08	1.144	3.274	1.04e-07	6.05e-09	1.12e-01
[47.6,59.9)	32	27	84.38	1.978	1.116	3.507	1.953e-02	0.98	6.324e-01	1.925			
≥ 59.9	31	30	96.77	5.671	3.097	1.038e+01	1.872e-08	0.33	1.697e-01	7.392e-01			
Profile Likelihood													
<59.8	62	51	82.26	----	----	----	----	1.34	1.087	2.078	7.59e-08	1.49e-09	3.29e-02
≥59.8	32	31	96.88	4.182	2.542	6.879	1.755e-08	0.31	2.300e-01	7.091e-01			
Quantitative	94	82	87.23	1.051	1.032	1.070	1.290e-07				1.048e-07	1.074e-07	

Cohort: Derivation

Outcome: Progression Free Survival by FVC (Lung Transplant counts as event)

Predictor: MMP7 (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 2.7	26	24	92.31	----	----	----	----	1.13	4.983e-01	2.431	1.71e-02	1.19e-02	6.51e-02
[2.7,3.76)	23	20	86.96	6.865e-01	3.780e-01	1.247	2.168e-01	1.72	9.062e-01	3.031			
[3.76,4.99)	27	23	85.19	9.159e-01	5.143e-01	1.631	7.654e-01	0.84	4.791e-01	2.300			
[4.99,6.41)	26	25	96.15	1.886	1.068	3.331	2.871e-02	0.50	2.683e-01	1.054			
≥ 6.41	26	23	88.46	1.327	7.412e-01	2.376	3.410e-01	0.88	6.324e-01	2.086			
Quartiles													
< 2.92	32	29	90.62	----	----	----	----	1.27	9.199e-01	2.606	2.91e-02	2.67e-02	1.76e-01
[2.92,4.3)	30	26	86.67	1.033	6.070e-01	1.757	9.054e-01	0.91	7.392e-01	2.491			
[4.3,5.73)	33	30	90.91	1.711	1.018	2.875	4.261e-02	0.67	4.791e-01	1.402			
≥ 5.73	33	30	90.91	1.918	1.127	3.265	1.644e-02	0.82	3.751e-01	1.087			
Tertiles													
< 3.51	43	38	88.37	----	----	----	----	1.34	9.199e-01	2.491	2.77e-02	2.93e-02	2.37e-01
[3.51,5.35)	42	38	90.48	1.532	9.744e-01	2.407	6.468e-02	0.74	5.010e-01	1.112			
≥ 5.35	43	39	90.70	1.822	1.148	2.892	1.085e-02	0.84	4.517e-01	1.588			
Profile Likelihood													
< 4.4	66	58	87.88	----	----	----	----	1.27	8.624e-01	2.275	1.42e-04	1.05e-04	8.16e-04
≥ 4.4	62	57	91.94	2.149	1.449	3.186	1.423e-04	0.67	4.791e-01	9.500e-01			
Quantitative	128	115	89.84	1.068	1.006	1.134	3.009e-02				3.779e-02	2.975e-02	

Cohort: Derivation

Outcome: Progression Free Survival by FVC (Lung Transplant counts as event)

Predictor: ICAM1 (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 158	27	24	88.89	----	----	----	----	1.11	9.199e-01	2.357	1.14e-01	9.35e-02	1.24e-01
[158,205)	26	22	84.62	9.470e-01	5.273e-01	1.701	8.552e-01	1.16	7.392e-01	2.300			
[205,252)	27	24	88.89	1.443	8.182e-01	2.546	2.051e-01	0.61	3.614e-01	2.491			
[252,351)	27	26	96.30	1.903	1.084	3.341	2.497e-02	0.62	4.081e-01	1.112			
≥ 351	28	26	92.86	1.160	6.620e-01	2.033	6.038e-01	0.86	7.775e-01	2.012			
Quartiles													
< 175	32	29	90.62	----	----	----	----	1.05	9.199e-01	2.300	5.17e-01	5.34e-01	5.41e-01
[175,230)	35	31	88.57	1.367	8.210e-01	2.277	2.293e-01	0.74	4.517e-01	1.572			
[230,318)	33	29	87.88	1.416	8.446e-01	2.376	1.869e-01	0.67	4.079e-01	2.078			
≥ 318	35	33	94.29	1.311	7.928e-01	2.167	2.916e-01	0.86	5.284e-01	1.717			
Tertiles													
< 197	46	40	86.96	----	----	----	----	1.13	9.199e-01	2.127	8.25e-02	8.84e-02	1.41e-01
[197,274)	43	39	90.70	1.571	1.006	2.452	4.695e-02	0.70	4.079e-01	1.333			
≥ 274	46	43	93.48	1.489	9.653e-01	2.298	7.180e-02	0.84	4.983e-01	1.402			
Profile Likelihood													
<202.5	50	43	86.00	----	----	----	----	1.14	9.199e-01	2.127	1.12e-02	1.21e-02	1.49e-02
≥202.5	85	79	92.94	1.608	1.106	2.337	1.280e-02	0.75	4.983e-01	9.391e-01			
Quantitative	135	122	90.37	1.001	9.995e-01	1.002	2.503e-01				2.609e-01	2.500e-01	

Cohort: **Derivation**

Outcome: **Progression Free Survival by FVC (Lung Transplant counts as event)**

Predictor: **IL8 (ng / mL)**

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 0.0051	25	23	92.00	----	----	----	----	1.05	7.392e-01	2.357	1.03e-02	7.58e-03	5.95e-04
[0.0051,0.00776)	27	22	81.48	1.844	1.048	3.244	3.368e-02	1.92	1.029	3.261			
[0.00776,0.00968)	28	25	89.29	6.745e-01	3.747e-01	1.214	1.890e-01	0.79	4.079e-01	2.275			
[0.00968,0.013)	27	26	96.30	9.699e-01	5.483e-01	1.716	9.164e-01	0.84	6.708e-01	1.342			
≥ 0.013	28	26	92.86	1.358	7.716e-01	2.388	2.889e-01	0.36	1.477e-01	9.391e-01			
Quartiles													
< 0.0056	32	29	90.62	----	----	----	----	1.11	7.392e-01	2.357	1.91e-03	1.52e-03	2.08e-04
[0.0056,0.0087)	31	25	80.65	1.896	1.168	3.078	9.678e-03	1.92	1.029	2.530			
[0.0087,0.011)	29	28	96.55	7.455e-01	4.359e-01	1.275	2.833e-01	0.67	4.517e-01	8.598e-01			
≥ 0.011	43	40	93.02	1.375	8.145e-01	2.321	2.334e-01	0.61	2.491e-01	9.391e-01			
Tertiles													
< 0.0066	41	36	87.80	----	----	----	----	1.27	9.199e-01	2.231	8.03e-03	5.17e-03	1.33e-03
[0.0066,0.00997)	48	43	89.58	1.055	6.744e-01	1.650	8.153e-01	0.82	7.091e-01	1.925			
≥ 0.00997	46	43	93.48	1.917	1.222	3.005	4.595e-03	0.67	2.683e-01	9.774e-01			
Profile Likelihood													
< 0.0092	74	64	86.49	----	----	----	----	1.25	9.500e-01	2.012	4.35e-04	3.07e-04	8.11e-05
≥ 0.0092	61	58	95.08	1.942	1.346	2.800	3.822e-04	0.71	4.791e-01	8.624e-01			
Quantitative*	135	122	90.37	0.9999	0.9866	1.013	9.852e-01				9.851e-01	9.852e-01	

*Units of pg / mL were used in **Quantitative model only**.

Cohort: Derivation
Outcome: Progression Free Survival by FVC (Lung Transplant counts as event)
Predictor: VCAM1 (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 335	26	23	88.46	----	----	----	----	1.11	6.324e-01	2.357	1.57e-02	2.36e-02	3.93e-02
[335,402)	27	22	81.48	5.636e-01	3.101e-01	1.024	6.002e-02	2.03	9.062e-01	4.044			
[402,457)	29	27	93.10	1.366	7.793e-01	2.394	2.762e-01	0.71	4.983e-01	1.112			
[457,572)	28	26	92.86	1.285	7.299e-01	2.263	3.848e-01	0.57	3.587e-01	1.714			
≥ 572	25	24	96.00	1.196	6.735e-01	2.123	5.415e-01	0.94	5.284e-01	1.947			
Quartiles													
< 359	34	28	82.35	----	----	----	----	1.14	6.324e-01	2.357	3.29e-02	2.71e-02	8.97e-02
[359,419)	32	29	90.62	1.021	6.066e-01	1.719	9.368e-01	1.05	8.598e-01	2.275			
[419,518)	37	35	94.59	1.922	1.156	3.196	1.172e-02	0.58	4.081e-01	9.008e-01			
≥ 518	32	30	93.75	1.478	8.787e-01	2.486	1.409e-01	0.84	3.313e-01	1.717			
Tertiles													
< 378	46	38	82.61	----	----	----	----	1.14	7.940e-01	2.078	1.63e-01	1.74e-01	3.74e-01
[378,480)	45	43	95.56	1.461	9.420e-01	2.264	9.043e-02	0.72	4.983e-01	1.273			
≥ 480	44	41	93.18	1.424	9.128e-01	2.221	1.193e-01	0.84	5.284e-01	1.361			
Profile Likelihood													
< 390.5	51	43	84.31	----	----	----	----	1.33	9.199e-01	2.275	3.30e-03	3.76e-03	1.02e-02
≥ 390.5	84	79	94.05	1.754	1.195	2.575	4.109e-03	0.75	5.749e-01	9.500e-01			
Quantitative													
	135	122	90.37	1.001	9.998e-01	1.002	1.180e-01				1.337e-01	1.176e-01	

Cohort: Derivation
Outcome: Progression Free Survival by FVC (Lung Transplant counts as event)
Predictor: S100A12 (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 15	26	22	84.62	----	----	----	----	1.83	8.624e-01	2.970	3.76e-03	1.90e-03	5.03e-03
[15,21.6)	29	24	82.76	1.790	9.910e-01	3.234	5.362e-02	0.86	6.708e-01	1.402			
[21.6,29)	26	24	92.31	1.246	6.974e-01	2.226	4.577e-01	1.13	7.502e-01	2.431			
[29,51)	26	26	100.00	3.056	1.700	5.493	1.883e-04	0.57	3.258e-01	9.199e-01			
≥ 51	28	26	92.86	1.707	9.657e-01	3.019	6.576e-02	0.53	3.258e-01	2.127			
Quartiles													
< 17.8	34	30	88.24	----	----	----	----	1.23	8.598e-01	2.111	1.66e-01	1.65e-01	2.21e-01
[17.8,25)	34	27	79.41	1.115	6.608e-01	1.882	6.832e-01	1.05	7.010e-01	2.034			
[25,45.2)	34	34	100.00	1.606	9.810e-01	2.630	5.960e-02	0.74	4.983e-01	1.144			
≥ 45.2	33	31	93.94	1.535	9.278e-01	2.540	9.529e-02	0.74	3.258e-01	1.572			
Tertiles													
< 19	39	34	87.18	----	----	----	----	1.11	8.350e-01	2.111	6.91e-02	5.99e-02	6.26e-02
[19,37)	51	45	88.24	1.126	7.201e-01	1.759	6.039e-01	1.05	7.091e-01	1.925			
≥ 37	45	43	95.56	1.659	1.056	2.606	2.820e-02	0.74	3.285e-01	9.391e-01			
Profile Likelihood													
< 26.5	75	64	85.33	----	----	----	----	1.14	8.624e-01	1.947	2.91e-03	2.37e-03	2.25e-03
≥ 26.5	60	58	96.67	1.731	1.211	2.475	2.631e-03	0.63	3.532e-01	9.199e-01			
Quantitative	135	122	90.37	1.002	9.981e-01	1.005	3.563e-01				3.798e-01	3.553e-01	

Cohort: Derivation

Outcome: Progression Free Survival by DLCO (Lung Transplant counts as event)

Predictor: Age (years)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 59.5	26	23	88.46	----	----	----	----	0.56	4.025e-01	1.673	6.92e-01	6.65e-01	2.77e-01
[59.5,66.1)	28	24	85.71	1.296	7.275e-01	2.309	3.787e-01	0.41	3.532e-01	1.744			
[66.1,69.7)	27	24	88.89	8.574e-01	4.799e-01	1.532	6.034e-01	0.98	7.775e-01	2.064			
[69.7,73.9)	26	25	96.15	9.604e-01	5.423e-01	1.701	8.899e-01	0.91	8.049e-01	2.070			
≥ 73.9	28	26	92.86	9.207e-01	5.234e-01	1.619	7.742e-01	1.12	5.941e-01	2.111			
Quartiles													
< 61.2	33	28	84.85	----	----	----	----	0.62	4.408e-01	1.673	3.34e-01	3.39e-01	1.21e-01
[61.2,68.5)	34	31	91.18	1.171	6.996e-01	1.960	5.482e-01	0.75	3.751e-01	1.035			
[68.5,73.3)	35	32	91.43	7.404e-01	4.434e-01	1.236	2.506e-01	1.40	8.433e-01	2.070			
≥ 73.3	33	31	93.94	9.603e-01	5.744e-01	1.606	8.773e-01	0.86	6.407e-01	1.396			
Tertiles													
< 64.7	45	39	86.67	----	----	----	----	0.62	4.353e-01	1.333	6.54e-01	6.55e-01	6.58e-02
[64.7,71.3)	45	40	88.89	8.175e-01	5.237e-01	1.276	3.751e-01	0.98	7.173e-01	2.034			
≥ 71.3	45	43	95.56	9.440e-01	6.107e-01	1.459	7.954e-01	0.84	6.708e-01	1.396			
Profile Likelihood													
<67.1	59	52	88.14	----	----	----	----	0.47	3.751e-01	8.598e-01	7.93e-02	7.48e-02	1.81e-01
≥67.1	76	70	92.11	7.213e-01	5.024e-01	1.035	7.648e-02	0.98	8.624e-01	1.446			
Quantitative													
	135	122	90.37	9.848e-01	9.610e-01	1.009	2.171e-01				2.190e-01	2.168e-01	
Predictor: Gender													
Female	36	32	88.89	----	----	----	----	1.12	0.843	1.82			
Male	99	90	90.91	1.20	0.798	1.794	3.85E-01	0.81	0.594	0.98	3.79E-01	3.85E-01	

Cohort: Derivation
Outcome: Progression Free Survival by DLCO (Lung Transplant counts as event)
Predictor: Baseline (4-month) FVC % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 43.3	24	23	95.83	----	----	----	----	0.40	1.533e-01	8.598e-01	8.54e-05	1.76e-04	1.53e-01
[43.3,56.6)	24	23	95.83	8.687e-01	4.849e-01	1.556	6.362e-01	0.59	4.791e-01	9.008e-01			
[56.6,66)	23	20	86.96	6.316e-01	3.463e-01	1.152	1.340e-01	0.84	7.091e-01	1.582			
[66,77)	22	21	95.45	6.643e-01	3.662e-01	1.205	1.781e-01	1.26	5.749e-01	1.744			
≥ 77	25	19	76.00	2.448e-01	1.269e-01	4.723e-01	2.690e-05	2.06	1.112				
Quartiles													
< 47.8	30	29	96.67	----	----	----	----	0.38	2.300e-01	8.378e-01	1.02e-04	1.50e-04	2.71e-01
[47.8,61.1)	30	27	90.00	7.290e-01	4.297e-01	1.237	2.411e-01	0.70	4.873e-01	1.035			
[61.1,74)	28	26	92.86	6.687e-01	3.928e-01	1.138	1.381e-01	0.98	7.091e-01	1.402			
≥ 74	30	24	80.00	2.862e-01	1.606e-01	5.100e-01	2.202e-05	1.67	1.112	4.044			
Tertiles													
< 52.8	40	39	97.50	----	----	----	----	0.50	2.930e-01	8.378e-01	2.54e-05	1.51e-05	1.39e-01
[52.8,69.9)	40	35	87.50	5.914e-01	3.736e-01	9.361e-01	2.498e-02	0.86	6.626e-01	1.342			
≥ 69.9	38	32	84.21	3.139e-01	1.904e-01	5.177e-01	5.622e-06	1.47	1.112	2.645			
Profile Likelihood													
< 76.9	93	87	93.55	----	----	----	----	0.72	5.830e-01	9.008e-01	5.11e-06	1.98e-05	2.14e-02
≥ 76.9	25	19	76.00	3.169e-01	1.825e-01	5.504e-01	4.500e-05	2.06	1.112				
Quantitative	118	106	89.83	9.788e-01	9.687e-01	9.889e-01	4.750e-05				3.332e-05	4.530e-05	

Cohort: Derivation
Outcome: Progression Free Survival by DLCO (Lung Transplant counts as event)
Predictor: Baseline (4-month) DLco % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 28.9	21	21	100.00	----	----	----	----	0.44	9.035e-02	1.123	3.53e-04	1.46e-04	4.86e-01
[28.9,39)	22	20	90.91	6.813e-01	3.671e-01	1.265	2.240e-01	0.82	2.930e-01	1.402			
[39,49.4)	21	18	85.71	4.564e-01	2.413e-01	8.630e-01	1.581e-02	0.86	5.941e-01	2.034			
[49.4,60)	20	18	90.00	3.505e-01	1.835e-01	6.696e-01	1.500e-03	1.25	8.049e-01	2.850			
≥ 60	22	17	77.27	2.370e-01	1.191e-01	4.718e-01	4.149e-05	1.74	1.035	2.850			
Quartiles													
< 31.6	26	26	100.00	----	----	----	----	0.80	2.300e-01	1.265	1.82e-04	1.04e-04	3.85e-01
[31.6,43.8)	27	24	88.89	9.882e-01	5.654e-01	1.727	9.669e-01	0.56	3.313e-01	9.774e-01			
[43.8,57)	25	22	88.00	4.332e-01	2.434e-01	7.712e-01	4.472e-03	1.34	8.624e-01	2.519			
≥ 57	28	22	78.57	3.412e-01	1.879e-01	6.198e-01	4.143e-04	1.47	1.035	2.645			
Tertiles													
< 36.6	35	34	97.14	----	----	----	----	0.44	2.546e-01	9.062e-01	4.13e-04	1.71e-04	8.20e-01
[36.6,53.4)	37	32	86.49	5.112e-01	3.144e-01	8.312e-01	6.825e-03	0.98	7.091e-01	1.673			
≥ 53.4	34	28	82.35	3.527e-01	2.092e-01	5.946e-01	9.228e-05	1.33	8.433e-01	2.645			
Profile Likelihood													
<41.0	51	49	96.08	----	----	----	----	0.59	4.025e-01	9.008e-01	1.20e-06	4.01e-07	1.41e-02
≥41.0	55	45	81.82	3.429e-01	2.229e-01	5.276e-01	1.119e-06	1.47	1.112	2.242			
Quantitative	106	94	88.68	9.728e-01	9.603e-01	9.855e-01	2.927e-05				2.582e-05	2.446e-05	

Cohort: Derivation
Outcome: Progression Free Survival by DLCO (Lung Transplant counts as event)
Predictor: Baseline (4-month) CPI

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 43	22	16	72.73	----	----	----	----	1.74	1.112		3.96e-05	1.78e-05	3.03e-01
[43,50.8)	20	18	90.00	1.373	6.907e-01	2.730	3.657e-01	1.14	8.624e-01	3.261			
[50.8,58.7)	21	19	90.48	2.294	1.144	4.603	1.941e-02	0.99	6.186e-01	1.673			
[58.7,64.5)	22	20	90.91	3.861	1.928	7.730	1.369e-04	0.59	4.081e-01	9.500e-01			
≥ 64.5	21	21	100.00	4.101	2.073	8.111	5.006e-05	0.40	8.761e-02	1.123			
Quartiles													
< 44.4	25	19	76.00	----	----	----	----	1.74	1.112		1.97e-05	3.42e-06	2.85e-01
[44.4,56)	27	24	88.89	1.422	7.700e-01	2.626	2.606e-01	1.23	8.433e-01	2.519			
[56,62.7)	27	24	88.89	2.378	1.267	4.461	6.977e-03	0.86	6.407e-01	1.446			
≥ 62.7	27	27	100.00	4.299	2.323	7.958	3.440e-06	0.33	1.477e-01	8.378e-01			
Tertiles													
< 47.7	34	27	79.41	----	----	----	----	1.47	1.087	2.645	5.81e-06	1.02e-06	1.58e-01
[47.7,59.8)	37	32	86.49	1.642	9.632e-01	2.800	6.841e-02	0.99	7.173e-01	1.703			
≥ 59.8	35	35	100.00	3.790	2.211	6.496	1.262e-06	0.44	2.546e-01	8.378e-01			
Profile Likelihood													
<56.2	55	45	81.82	----	----	----	----	1.45	1.112	2.242	1.11e-06	3.63e-07	3.71e-02
≥56.2	51	49	96.08	2.924	1.902	4.497	1.023e-06	0.59	4.025e-01	8.624e-01			
Quantitative	106	94	88.68	1.040	1.023	1.058	6.016e-06				5.327e-06	5.830e-06	

Cohort: Derivation
Outcome: Progression Free Survival by DLCO (Lung Transplant counts as event)
Predictor: Baseline (3-month) FVC % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 43.1	22	21	95.45	----	----	----	----	0.28	1.477e-01	1.703	1.05e-04	1.75e-04	2.33e-01
[43.1,56.5)	21	20	95.24	1.046	5.589e-01	1.957	8.888e-01	0.56	3.587e-01	9.008e-01			
[56.5,65.7)	22	19	86.36	6.227e-01	3.340e-01	1.161	1.360e-01	0.86	6.626e-01	2.242			
[65.7,76.7)	19	18	94.74	6.697e-01	3.553e-01	1.262	2.152e-01	1.26	5.749e-01	1.821			
≥ 76.7	22	16	72.73	2.462e-01	1.230e-01	4.925e-01	7.452e-05	2.06	1.144				
Quartiles													
< 47.8	27	26	96.30	----	----	----	----	0.33	1.697e-01	7.775e-01	7.94e-05	1.17e-04	2.96e-01
[47.8,60.5)	27	24	88.89	7.048e-01	4.024e-01	1.234	2.211e-01	0.70	4.791e-01	1.035			
[60.5,73.4)	27	25	92.59	6.264e-01	3.606e-01	1.088	9.679e-02	0.91	6.626e-01	1.402			
≥ 73.4	25	19	76.00	2.511e-01	1.337e-01	4.716e-01	1.735e-05	1.95	1.144				
Tertiles													
< 52.4	36	35	97.22	----	----	----	----	0.40	2.300e-01	7.775e-01	4.02e-05	2.54e-05	2.92e-01
[52.4,69.6)	36	31	86.11	5.970e-01	3.670e-01	9.712e-01	3.773e-02	0.84	6.407e-01	1.235			
≥ 69.6	34	28	82.35	3.024e-01	1.781e-01	5.134e-01	9.482e-06	1.46	1.246	2.645			
Profile Likelihood													
< 76.3	83	77	92.77	----	----	----	----	0.67	4.873e-01	9.008e-01	1.02e-05	3.36e-05	4.70e-02
≥ 76.3	23	17	73.91	3.147e-01	1.777e-01	5.573e-01	7.353e-05	2.06	1.144				
Quantitative													
	106	94	88.68	9.774e-01	9.669e-01	9.880e-01	3.163e-05				2.211e-05	3.013e-05	

Cohort: **Derivation**

Outcome: **Progression Free Survival by DLCO (Lung Transplant counts as event)**

Predictor: **Baseline (3-month) DLco % Predicted**

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 28.6	18	18	100.00	----	----	----	----	0.33	8.761e-02	1.265	8.30e-04	4.57e-04	6.40e-01
[28.6,38)	18	16	88.89	7.422e-01	3.746e-01	1.471	3.928e-01	0.40	1.834e-01	1.582			
[38,49.9)	20	17	85.00	4.481e-01	2.296e-01	8.744e-01	1.859e-02	0.86	6.708e-01	1.821			
[49.9,61)	18	17	94.44	4.362e-01	2.234e-01	8.518e-01	1.511e-02	1.14	7.173e-01	2.519			
≥ 61	20	15	75.00	2.285e-01	1.096e-01	4.765e-01	8.249e-05	2.06	8.433e-01				
Quartiles													
< 31.4	23	23	100.00	----	----	----	----	0.58	1.697e-01	1.265	4.54e-04	4.27e-04	5.96e-01
[31.4,41.3)	24	21	87.50	9.550e-01	5.262e-01	1.733	8.796e-01	0.56	2.930e-01	9.774e-01			
[41.3,57.2)	23	21	91.30	5.404e-01	2.984e-01	9.784e-01	4.215e-02	1.23	7.173e-01	1.947			
≥ 57.2	24	18	75.00	3.024e-01	1.579e-01	5.793e-01	3.110e-04	2.06	1.035				
Tertiles													
< 34.5	31	30	96.77	----	----	----	----	0.41	2.300e-01	9.500e-01	8.36e-04	5.54e-04	9.98e-01
[34.5,54.3)	32	28	87.50	6.023e-01	3.592e-01	1.010	5.455e-02	0.98	6.407e-01	1.582			
≥ 54.3	31	25	80.65	3.477e-01	2.000e-01	6.046e-01	1.822e-04	1.47	8.049e-01	2.645			
Profile Likelihood													
<41.0	46	44	95.65	----	----	----	----	0.56	2.930e-01	9.008e-01	6.01e-06	2.36e-06	3.66e-02
≥41.0	48	39	81.25	3.498e-01	2.222e-01	5.507e-01	5.717e-06	1.34	1.035	2.070			
Quantitative	94	83	88.30	9.731e-01	9.602e-01	9.861e-01	5.720e-05				5.179e-05	4.502e-05	

Cohort: Derivation
Outcome: Progression Free Survival by DLCO (Lung Transplant counts as event)
Predictor: Baseline (3-month) CPI

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 42.8	19	13	68.42	----	----	----	----	2.06	1.333		1.49e-04	1.05e-04	5.12e-01
[42.8,51.5)	18	17	94.44	1.751	8.328e-01	3.681	1.395e-01	1.12	8.433e-01	2.645			
[51.5,59)	19	16	84.21	2.543	1.175	5.505	1.783e-02	0.98	6.186e-01	1.446			
[59,65.1)	19	18	94.74	4.360	2.046	9.290	1.359e-04	0.47	2.930e-01	9.500e-01			
≥ 65.1	19	19	100.00	4.257	2.026	8.945	1.312e-04	0.33	8.761e-02	1.265			
Quartiles													
< 44.3	23	17	73.91	----	----	----	----	1.74	1.035		3.84e-05	1.46e-05	2.87e-01
[44.3,56.1)	24	21	87.50	1.557	8.098e-01	2.992	1.844e-01	1.23	8.433e-01	2.242			
[56.1,62.8)	24	22	91.67	3.044	1.560	5.940	1.097e-03	0.67	5.010e-01	9.856e-01			
≥ 62.8	23	23	100.00	4.248	2.206	8.182	1.523e-05	0.23	9.035e-02	9.062e-01			
Tertiles													
< 47.6	31	24	77.42	----	----	----	----	1.74	1.035	2.645	1.47e-05	3.87e-06	2.22e-01
[47.6,59.9)	32	28	87.50	1.833	1.042	3.222	3.541e-02	0.98	6.708e-01	1.446			
≥ 59.9	31	31	100.00	3.862	2.196	6.791	2.712e-06	0.40	1.697e-01	9.008e-01			
Profile Likelihood													
<56.2	48	39	81.25	----	----	----	----	1.34	1.087	2.070	5.56e-06	2.15e-06	9.35e-02
≥56.2	46	44	95.65	2.869	1.823	4.516	5.247e-06	0.56	3.313e-01	8.624e-01			
Quantitative	94	83	88.30	1.040	1.022	1.058	1.192e-05				1.071e-05	1.045e-05	

Cohort: Derivation
Outcome: Progression Free Survival by DLCO (Lung Transplant counts as event)
Predictor: MMP7 (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 2.7	26	23	88.46	----	----	----	----	1.06	4.736e-01	1.744	5.64e-01	5.81e-01	5.28e-01
[2.7,3.76)	23	20	86.96	7.291e-01	3.988e-01	1.333	3.046e-01	0.99	7.502e-01	2.970			
[3.76,4.99)	27	25	92.59	1.064	5.977e-01	1.896	8.319e-01	0.80	4.791e-01	1.112			
[4.99,6.41)	26	24	92.31	1.196	6.741e-01	2.121	5.410e-01	0.53	3.313e-01	1.582			
≥ 6.41	26	24	92.31	9.877e-01	5.563e-01	1.754	9.664e-01	0.86	6.407e-01	2.111			
Quartiles													
< 2.92	32	29	90.62	----	----	----	----	1.14	6.626e-01	1.744	5.05e-01	5.11e-01	6.25e-01
[2.92,4.3)	30	26	86.67	8.391e-01	4.889e-01	1.440	5.243e-01	0.80	7.010e-01	2.341			
[4.3,5.73)	33	30	90.91	1.239	7.424e-01	2.068	4.123e-01	0.57	4.791e-01	1.446			
≥ 5.73	33	31	93.94	1.130	6.797e-01	1.880	6.368e-01	0.90	6.407e-01	1.582			
Tertiles													
< 3.51	43	37	86.05	----	----	----	----	1.33	7.091e-01	2.070	2.57e-01	2.62e-01	3.50e-01
[3.51,5.35)	42	39	92.86	1.447	9.169e-01	2.284	1.125e-01	0.67	5.010e-01	9.062e-01			
≥ 5.35	43	40	93.02	1.297	8.274e-01	2.033	2.568e-01	0.95	6.407e-01	1.582			
Profile Likelihood													
< 3.9	52	45	86.54	----	----	----	----	0.99	7.173e-01	1.744	3.45e-02	3.57e-02	2.71e-02
≥ 3.9	76	71	93.42	1.497	1.025	2.187	3.678e-02	0.84	5.749e-01	1.035			
Quantitative													
	128	116	90.62	1.026	0.963	1.093	4.271e-01				4.337e-01	4.271e-01	

Cohort: Derivation
Outcome: Progression Free Survival by DLCO (Lung Transplant counts as event)
Predictor: ICAM1 (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 158	27	24	88.89	----	----	----	----	1.14	7.173e-01	2.070	6.04e-01	5.87e-01	4.72e-01
[158,205)	26	22	84.62	1.080	6.049e-01	1.930	7.940e-01	0.85	7.010e-01	2.242			
[205,252)	27	25	92.59	1.354	7.723e-01	2.374	2.900e-01	0.62	4.079e-01	1.821			
[252,351)	27	25	92.59	1.426	8.130e-01	2.500	2.159e-01	0.77	4.408e-01	1.333			
≥ 351	28	26	92.86	1.004	5.689e-01	1.771	9.900e-01	0.84	4.791e-01	2.111			
Quartiles													
< 175	32	28	87.50	----	----	----	----	1.13	7.173e-01	2.070	3.86e-01	3.70e-01	2.94e-01
[175,230)	35	32	91.43	1.558	9.352e-01	2.596	8.857e-02	0.75	5.558e-01	9.008e-01			
[230,318)	33	29	87.88	1.190	7.075e-01	2.003	5.115e-01	0.91	4.079e-01	1.673			
≥ 318	35	33	94.29	1.141	6.836e-01	1.904	6.141e-01	0.84	6.407e-01	1.714			
Tertiles													
< 197	46	40	86.96	----	----	----	----	1.05	8.433e-01	2.064	3.44e-01	3.40e-01	3.38e-01
[197,274)	43	39	90.70	1.388	8.919e-01	2.159	1.463e-01	0.70	4.983e-01	1.035			
≥ 274	46	43	93.48	1.205	7.790e-01	1.864	4.021e-01	0.84	5.284e-01	1.473			
Profile Likelihood													
<184.5	41	36	87.80	----	----	----	----	1.11	8.433e-01	2.070	1.39e-01	1.44e-01	9.90e-02
≥184.5	94	86	91.49	1.337	9.039e-01	1.978	1.458e-01	0.82	5.941e-01	9.774e-01			
Quantitative	135	122	90.37	1.000	9.989e-01	1.002	7.367e-01				7.385e-01	7.367e-01	

Cohort: **Derivation**

Outcome: **Progression Free Survival by DLCO (Lung Transplant counts as event)**

Predictor: **IL8 (ng / mL)**

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 0.0051	25	22	88.00	----	----	----	----	1.25	5.558e-01	2.242	3.01e-03	1.70e-03	3.33e-02
[0.0051,0.00776)	27	20	74.07	2.111	1.194	3.731	1.017e-02	1.23	8.405e-01				
[0.00776,0.00968)	28	27	96.43	6.554e-01	3.538e-01	1.214	1.793e-01	0.84	4.081e-01	2.352			
[0.00968,0.013)	27	26	96.30	1.040	5.906e-01	1.832	8.914e-01	0.84	6.407e-01	1.673			
≥ 0.013	28	27	96.43	1.338	7.561e-01	2.366	3.176e-01	0.53	1.477e-01	1.087			
Quartiles													
< 0.0056	32	28	87.50	----	----	----	----	1.11	4.983e-01	2.064	6.37e-05	7.84e-05	7.52e-04
[0.0056,0.0087)	31	24	77.42	1.809	1.111	2.946	1.716e-02	2.03	9.856e-01	4.153			
[0.0087,0.011)	29	29	100.00	5.449e-01	3.103e-01	9.569e-01	3.458e-02	0.72	5.010e-01	8.624e-01			
≥ 0.011	43	41	95.35	1.331	7.898e-01	2.242	2.831e-01	0.64	3.450e-01	9.774e-01			
Tertiles													
< 0.0066	41	34	82.93	----	----	----	----	1.33	5.558e-01	2.064	1.86e-03	9.42e-04	2.36e-02
[0.0066,0.00997)	48	44	91.67	1.000	6.352e-01	1.574	9.999e-01	0.86	7.940e-01	2.111			
≥ 0.00997	46	44	95.65	2.054	1.299	3.246	2.059e-03	0.64	3.450e-01	9.774e-01			
Profile Likelihood													
< 0.0086	63	52	82.54	----	----	----	----	1.25	9.500e-01	2.070	6.23e-05	5.39e-05	9.24e-04
≥ 0.0086	72	70	97.22	2.121	1.462	3.076	7.516e-05	0.67	5.010e-01	8.598e-01			
Quantitative*	135	122	90.37	1.023	1.007	1.038	3.587e-03				1.765e-02	2.720e-03	

*Units of pg / mL were used in **Quantitative model only**.

Cohort: Derivation
Outcome: Progression Free Survival by DLCO (Lung Transplant counts as event)
Predictor: VCAM1 (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 335	26	23	88.46	----	----	----	----	0.99	5.830e-01	1.744	7.13e-02	8.45e-02	9.85e-02
[335,402)	27	24	88.89	6.076e-01	3.391e-01	1.089	9.412e-02	2.03	9.062e-01	2.664			
[402,457)	29	26	89.66	1.136	6.446e-01	2.001	6.596e-01	0.70	4.791e-01	1.035			
[457,572)	28	26	92.86	1.318	7.479e-01	2.324	3.394e-01	0.44	2.930e-01	1.087			
≥ 572	25	23	92.00	1.034	5.771e-01	1.852	9.112e-01	0.95	5.941e-01	1.947			
Quartiles													
< 359	34	31	91.18	----	----	----	----	1.14	6.407e-01	1.821	2.50e-02	2.82e-02	6.15e-02
[359,419)	32	27	84.38	6.559e-01	3.873e-01	1.111	1.165e-01	1.03	8.405e-01	2.645			
[419,518)	37	35	94.59	1.380	8.468e-01	2.250	1.961e-01	0.49	4.079e-01	9.008e-01			
≥ 518	32	29	90.62	1.208	7.258e-01	2.011	4.671e-01	0.84	3.450e-01	1.473			
Tertiles													
< 378	46	40	86.96	----	----	----	----	1.14	8.049e-01	1.744	5.90e-01	5.94e-01	8.57e-01
[378,480)	45	42	93.33	1.166	7.523e-01	1.806	4.927e-01	0.71	4.791e-01	1.112			
≥ 480	44	40	90.91	1.251	8.054e-01	1.943	3.189e-01	0.84	4.408e-01	1.342			
Profile Likelihood													
< 418.0	66	58	87.88	----	----	----	----	1.14	8.433e-01	2.034	1.03e-02	9.68e-03	3.30e-02
≥ 418.0	69	64	92.75	1.604	1.118	2.302	1.035e-02	0.70	4.353e-01	9.008e-01			
Quantitative													
	135	122	90.37	1.001	9.998e-01	1.002	1.208e-01				1.379e-01	1.205e-01	

Cohort: Derivation
Outcome: Progression Free Survival by DLCO (Lung Transplant counts as event)
Predictor: S100A12 (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 15	26	23	88.46	----	----	----	----	1.37	8.049e-01	2.341	2.66e-02	1.22e-02	3.04e-02
[15,21.6)	29	24	82.76	1.246	7.005e-01	2.216	4.542e-01	0.95	7.010e-01	1.821			
[21.6,29)	26	23	88.46	1.042	5.823e-01	1.865	8.897e-01	1.03	5.941e-01	2.431			
[29,51)	26	26	100.00	2.445	1.376	4.344	2.305e-03	0.59	3.532e-01	8.624e-01			
≥ 51	28	26	92.86	1.304	7.393e-01	2.301	3.592e-01	0.84	3.313e-01	2.127			
Quartiles													
< 17.8	34	31	91.18	----	----	----	----	1.01	8.433e-01	1.947	1.36e-01	1.24e-01	1.54e-01
[17.8,25)	34	27	79.41	8.929e-01	5.321e-01	1.498	6.680e-01	1.12	7.010e-01	2.242			
[25,45.2)	34	33	97.06	1.568	9.563e-01	2.572	7.461e-02	0.64	4.873e-01	8.624e-01			
≥ 45.2	33	31	93.94	1.257	7.601e-01	2.079	3.729e-01	0.84	3.614e-01	1.473			
Tertiles													
< 19	39	35	89.74	----	----	----	----	0.98	8.350e-01	1.947	2.05e-01	1.90e-01	1.68e-01
[19,37)	51	44	86.27	9.798e-01	6.269e-01	1.531	9.288e-01	0.91	5.941e-01	1.402			
≥ 37	45	43	95.56	1.401	8.936e-01	2.197	1.416e-01	0.79	4.983e-01	1.087			
Profile Likelihood													
< 25.5	71	60	84.51	----	----	----	----	1.12	8.598e-01	1.821	3.50e-03	2.98e-03	1.41e-03
≥ 25.5	64	62	96.88	1.714	1.196	2.457	3.347e-03	0.64	4.873e-01	8.624e-01			
Quantitative													
	135	122	90.37	1.001	9.974e-01	1.005	5.518e-01				5.648e-01	5.514e-01	

Cohort: Derivation

Outcome: Progression Free Survival by CPI (Lung Transplant counts as event)

Predictor: Age (years)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 59.5	26	23	88.46	----	----	----	----	0.56	4.025e-01	1.673	6.57e-01	6.35e-01	5.53e-01
[59.5,66.1)	28	24	85.71	1.295	7.266e-01	2.308	3.807e-01	0.67	3.587e-01	1.744			
[66.1,69.7)	27	25	92.59	9.473e-01	5.329e-01	1.684	8.536e-01	0.98	7.173e-01	2.223			
[69.7,73.9)	26	25	96.15	9.968e-01	5.624e-01	1.767	9.914e-01	0.86	8.049e-01	2.070			
≥ 73.9	28	25	89.29	8.306e-01	4.701e-01	1.468	5.228e-01	1.14	6.407e-01	2.606			
Quartiles													
< 61.2	33	28	84.85	----	----	----	----	0.62	4.408e-01	1.673	6.57e-01	6.48e-01	3.56e-01
[61.2,68.5)	34	31	91.18	1.109	6.624e-01	1.856	6.945e-01	0.84	4.079e-01	1.112			
[68.5,73.3)	35	33	94.29	8.272e-01	4.972e-01	1.376	4.653e-01	0.99	8.350e-01	2.078			
≥ 73.3	33	30	90.91	8.737e-01	5.207e-01	1.466	6.090e-01	0.90	6.626e-01	2.300			
Tertiles													
< 64.7	45	39	86.67	----	----	----	----	0.75	4.736e-01	1.333	8.23e-01	8.16e-01	1.54e-01
[64.7,71.3)	45	41	91.11	8.768e-01	5.633e-01	1.365	5.601e-01	0.95	7.010e-01	2.078			
≥ 71.3	45	42	93.33	8.947e-01	5.777e-01	1.386	6.180e-01	0.86	7.392e-01	1.596			
Profile Likelihood													
<65.5	51	45	88.24	----	----	----	----	0.50	4.025e-01	1.087	1.12e-01	1.03e-01	3.76e-01
≥65.5	84	77	91.67	7.373e-01	5.090e-01	1.068	1.068e-01	0.96	8.433e-01	1.473			
Quantitative													
	135	122	90.37	9.838e-01	9.602e-01	1.008	1.844e-01				1.863e-01	1.840e-01	
Predictor: Gender													
Female	36	31	86.11	----	----	----	----	1.28	0.862	2.22			
Male	99	91	91.92	1.30	0.861	1.952	2.14E-01	0.82	0.671	0.98	2.05E-01	2.12E-01	

Cohort: **Derivation**

Outcome: **Progression Free Survival by CPI (Lung Transplant counts as event)**

Predictor: **Baseline (4-month) FVC % Predicted**

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 43.3	24	23	95.83	----	----	----	----	0.40	1.533e-01	8.598e-01	1.14e-03	1.60e-03	6.68e-02
[43.3,56.6)	24	22	91.67	6.491e-01	3.605e-01	1.169	1.498e-01	0.72	4.873e-01	2.223			
[56.6,66)	23	20	86.96	6.405e-01	3.511e-01	1.168	1.462e-01	0.84	7.091e-01	1.648			
[66,77)	22	21	95.45	6.504e-01	3.590e-01	1.179	1.561e-01	1.25	6.708e-01	1.744			
≥ 77	25	20	80.00	2.688e-01	1.409e-01	5.129e-01	6.735e-05	1.47	1.087	4.153			
Quartiles													
< 47.8	30	29	96.67	----	----	----	----	0.38	2.300e-01	8.598e-01	6.97e-04	8.12e-04	8.38e-02
[47.8,61.1)	30	26	86.67	6.382e-01	3.740e-01	1.089	9.943e-02	0.86	6.186e-01	1.284			
[61.1,74)	28	26	92.86	7.352e-01	4.317e-01	1.252	2.574e-01	0.91	7.091e-01	1.596			
≥ 74	30	25	83.33	3.221e-01	1.822e-01	5.695e-01	9.757e-05	1.57	1.087	2.970			
Tertiles													
< 52.8	40	38	95.00	----	----	----	----	0.58	3.285e-01	9.008e-01	4.63e-04	3.61e-04	8.40e-02
[52.8,69.9)	40	35	87.50	6.462e-01	4.070e-01	1.026	6.423e-02	0.86	7.010e-01	1.596			
≥ 69.9	38	33	86.84	3.752e-01	2.285e-01	6.162e-01	1.076e-04	1.42	1.087	2.502			
Profile Likelihood													
< 76.9	93	86	92.47	----	----	----	----	0.80	6.626e-01	9.391e-01	9.60e-05	2.38e-04	2.56e-02
≥ 76.9	25	20	80.00	3.781e-01	2.211e-01	6.467e-01	3.821e-04	1.47	1.087	4.153			
Quantitative	118	106	89.83	9.824e-01	9.720e-01	9.930e-01	1.210e-03				1.031e-03	1.182e-03	

Cohort: Derivation

Outcome: Progression Free Survival by CPI (Lung Transplant counts as event)

Predictor: Baseline (4-month) DLco % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 28.9	21	20	95.24	----	----	----	----	0.58	9.035e-02	9.500e-01	2.00e-03	8.82e-04	6.36e-01
[28.9,39)	22	20	90.91	6.228e-01	3.319e-01	1.169	1.405e-01	0.99	2.930e-01	1.673			
[39,49.4)	21	19	90.48	4.621e-01	2.446e-01	8.730e-01	1.739e-02	0.93	7.091e-01	2.341			
[49.4,60)	20	18	90.00	3.567e-01	1.846e-01	6.893e-01	2.163e-03	1.25	8.049e-01	2.850			
≥ 60	22	17	77.27	2.609e-01	1.297e-01	5.245e-01	1.628e-04	1.47	8.433e-01				
Quartiles													
< 31.6	26	25	96.15	----	----	----	----	0.83	2.300e-01	1.402	1.45e-03	1.03e-03	4.40e-01
[31.6,43.8)	27	25	92.59	1.008	5.781e-01	1.758	9.769e-01	0.71	3.751e-01	1.087			
[43.8,57)	25	22	88.00	4.695e-01	2.623e-01	8.405e-01	1.093e-02	1.60	8.624e-01	2.519			
≥ 57	28	22	78.57	3.976e-01	2.179e-01	7.255e-01	2.647e-03	1.33	8.433e-01	2.645			
Tertiles													
< 36.6	35	33	94.29	----	----	----	----	0.58	2.546e-01	9.391e-01	2.40e-03	1.28e-03	7.48e-01
[36.6,53.4)	37	33	89.19	5.421e-01	3.336e-01	8.807e-01	1.340e-02	1.16	8.624e-01	1.947			
≥ 53.4	34	28	82.35	3.998e-01	2.365e-01	6.760e-01	6.224e-04	1.14	8.049e-01	2.645			
Profile Likelihood													
<42.7	53	50	94.34	----	----	----	----	0.74	4.081e-01	9.500e-01	9.71e-05	6.34e-05	1.75e-01
≥42.7	53	44	83.02	4.310e-01	2.820e-01	6.588e-01	1.008e-04	1.47	1.035	2.341			
Quantitative	106	94	88.68	9.746e-01	9.617e-01	9.878e-01	1.665e-04				1.398e-04	1.479e-04	

Cohort: **Derivation**

Outcome: **Progression Free Survival by CPI (Lung Transplant counts as event)**

Predictor: **Baseline (4-month) CPI**

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 43	22	17	77.27	----	----	----	----	1.47	1.035		3.76e-03	2.71e-03	7.14e-01
[43,50.8)	20	18	90.00	1.197	6.087e-01	2.352	6.028e-01	1.14	8.624e-01	3.261			
[50.8,58.7)	21	19	90.48	1.864	9.445e-01	3.681	7.260e-02	1.23	6.186e-01	1.673			
[58.7,64.5)	22	20	90.91	2.595	1.324	5.087	5.502e-03	0.71	5.010e-01	1.396			
≥ 64.5	21	20	95.24	3.008	1.536	5.889	1.316e-03	0.40	8.761e-02	1.714			
Quartiles													
< 44.4	25	20	80.00	----	----	----	----	1.47	1.035	2.645	7.84e-04	2.15e-04	3.36e-01
[44.4,56)	27	24	88.89	1.188	6.489e-01	2.175	5.767e-01	1.23	8.433e-01	2.519			
[56,62.7)	27	24	88.89	1.766	9.553e-01	3.263	6.969e-02	0.98	7.392e-01	1.673			
≥ 62.7	27	26	96.30	3.239	1.768	5.935	1.417e-04	0.33	1.477e-01	9.008e-01			
Tertiles													
< 47.7	34	28	82.35	----	----	----	----	1.33	1.035	2.491	7.68e-04	3.48e-04	4.30e-01
[47.7,59.8)	37	32	86.49	1.403	8.288e-01	2.374	2.075e-01	1.23	8.624e-01	1.703			
≥ 59.8	35	34	97.14	2.718	1.605	4.601	1.976e-04	0.58	2.546e-01	9.062e-01			
Profile Likelihood													
<60.6	76	65	85.53	----	----	----	----	1.25	9.774e-01	1.703	5.32e-05	6.94e-06	4.38e-02
≥60.6	30	29	96.67	2.698	1.720	4.233	1.561e-05	0.37	1.697e-01	8.378e-01			
Quantitative													
	106	94	88.68	1.033	1.015	1.052	2.952e-04				2.518e-04	2.916e-04	

Cohort: Derivation

Outcome: Progression Free Survival by CPI (Lung Transplant counts as event)

Predictor: Baseline (3-month) FVC % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 43.1	22	21	95.45	----	----	----	----	0.28	1.477e-01	1.703	1.93e-03	2.85e-03	1.99e-01
[43.1,56.5)	21	19	90.48	8.032e-01	4.288e-01	1.505	4.937e-01	0.62	4.081e-01	1.284			
[56.5,65.7)	22	19	86.36	6.284e-01	3.370e-01	1.172	1.438e-01	0.86	6.626e-01	2.031			
[65.7,76.7)	19	18	94.74	6.559e-01	3.484e-01	1.235	1.913e-01	1.25	5.749e-01	1.947			
≥ 76.7	22	17	77.27	2.763e-01	1.400e-01	5.451e-01	2.069e-04	1.47	1.087				
Quartiles													
< 47.8	27	26	96.30	----	----	----	----	0.33	1.697e-01	8.598e-01	6.52e-04	8.55e-04	1.15e-01
[47.8,60.5)	27	23	85.19	6.623e-01	3.754e-01	1.169	1.550e-01	0.86	4.873e-01	1.235			
[60.5,73.4)	27	25	92.59	6.962e-01	4.006e-01	1.210	1.989e-01	0.86	6.626e-01	1.596			
≥ 73.4	25	20	80.00	2.932e-01	1.581e-01	5.438e-01	9.893e-05	1.95	1.087	4.153			
Tertiles													
< 52.4	36	34	94.44	----	----	----	----	0.40	2.300e-01	8.598e-01	5.44e-04	4.64e-04	1.71e-01
[52.4,69.6)	36	31	86.11	6.709e-01	4.111e-01	1.095	1.102e-01	0.86	6.626e-01	9.856e-01			
≥ 69.6	34	29	85.29	3.626e-01	2.150e-01	6.116e-01	1.426e-04	1.46	1.144	2.502			
Profile Likelihood													
< 76.3	83	76	91.57	----	----	----	----	0.71	5.010e-01	9.336e-01	8.06e-05	1.95e-04	3.08e-02
≥ 76.3	23	18	78.26	3.609e-01	2.070e-01	6.291e-01	3.246e-04	2.07	1.087				
Quantitative													
	106	94	88.68	9.812e-01	9.703e-01	9.921e-01	7.998e-04				6.802e-04	7.796e-04	

Cohort: **Derivation**

Outcome: **Progression Free Survival by CPI (Lung Transplant counts as event)**

Predictor: **Baseline (3-month) DLco % Predicted**

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 28.6	18	18	100.00	----	----	----	----	0.41	8.761e-02	9.500e-01	3.33e-03	1.65e-03	6.30e-01
[28.6,38)	18	15	83.33	5.712e-01	2.831e-01	1.152	1.179e-01	0.40	1.834e-01	2.932			
[38,49.9)	20	18	90.00	4.479e-01	2.320e-01	8.646e-01	1.669e-02	0.98	7.392e-01	2.034			
[49.9,61)	18	17	94.44	4.217e-01	2.152e-01	8.261e-01	1.184e-02	1.14	7.173e-01	2.519			
≥ 61	20	15	75.00	2.349e-01	1.120e-01	4.929e-01	1.277e-04	1.47	4.983e-01				
Quartiles													
< 31.4	23	22	95.65	----	----	----	----	0.67	1.697e-01	1.446	1.92e-03	1.92e-03	5.13e-01
[31.4,41.3)	24	22	91.67	1.110	6.129e-01	2.011	7.301e-01	0.71	3.313e-01	9.856e-01			
[41.3,57.2)	23	21	91.30	6.015e-01	3.299e-01	1.097	9.716e-02	1.23	7.173e-01	2.034			
≥ 57.2	24	18	75.00	3.606e-01	1.871e-01	6.949e-01	2.309e-03	1.65	8.433e-01				
Tertiles													
< 34.5	31	29	93.55	----	----	----	----	0.41	2.300e-01	9.500e-01	5.32e-03	4.69e-03	8.82e-01
[34.5,54.3)	32	29	90.62	6.774e-01	4.039e-01	1.136	1.398e-01	0.98	7.091e-01	1.703			
≥ 54.3	31	25	80.65	4.024e-01	2.303e-01	7.032e-01	1.390e-03	1.33	7.173e-01	2.645			
Profile Likelihood													
<41.0	46	43	93.48	----	----	----	----	0.67	3.313e-01	9.391e-01	2.26e-04	1.44e-04	2.31e-01
≥41.0	48	40	83.33	4.294e-01	2.744e-01	6.721e-01	2.167e-04	1.33	8.624e-01	2.070			
Quantitative	94	83	88.30	9.752e-01	9.620e-01	9.887e-01	3.221e-04				2.781e-04	2.744e-04	

Cohort: Derivation
Outcome: Progression Free Survival by CPI (Lung Transplant counts as event)
Predictor: Baseline (3-month) CPI

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 42.8	19	14	73.68	----	----	----	----	1.74	4.983e-01		6.91e-03	5.98e-03	7.73e-01
[42.8,51.5)	18	17	94.44	1.495	7.234e-01	3.089	2.777e-01	1.12	8.433e-01	2.645			
[51.5,59)	19	16	84.21	1.964	9.288e-01	4.155	7.729e-02	1.11	6.186e-01	1.596			
[59,65.1)	19	18	94.74	3.182	1.527	6.629	1.993e-03	0.66	4.025e-01	9.500e-01			
≥ 65.1	19	18	94.74	2.988	1.444	6.184	3.174e-03	0.33	8.761e-02	2.127			
Quartiles													
< 44.3	23	18	78.26	----	----	----	----	1.47	8.049e-01		1.67e-03	1.01e-03	4.52e-01
[44.3,56.1)	24	21	87.50	1.343	7.069e-01	2.552	3.676e-01	1.23	8.433e-01	2.502			
[56.1,62.8)	24	22	91.67	2.361	1.230	4.532	9.842e-03	0.74	6.708e-01	1.284			
≥ 62.8	23	22	95.65	3.148	1.652	5.999	4.909e-04	0.23	9.035e-02	9.391e-01			
Tertiles													
< 47.6	31	25	80.65	----	----	----	----	1.47	8.433e-01	2.491	7.14e-04	3.36e-04	3.56e-01
[47.6,59.9)	32	28	87.50	1.524	8.746e-01	2.654	1.370e-01	0.98	7.173e-01	1.596			
≥ 59.9	31	30	96.77	2.920	1.678	5.082	1.500e-04	0.40	1.697e-01	9.062e-01			
Profile Likelihood													
<56.2	48	40	83.33	----	----	----	----	1.33	1.035	2.070	2.13e-04	1.35e-04	1.53e-01
≥56.2	46	43	93.48	2.336	1.493	3.655	2.035e-04	0.67	3.751e-01	9.336e-01			
Quantitative	94	83	88.30	1.033	1.014	1.052	4.478e-04				3.912e-04	4.238e-04	

Cohort: Derivation
Outcome: Progression Free Survival by CPI (Lung Transplant counts as event)
Predictor: MMP7 (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 2.7	26	23	88.46	----	----	----	----	1.00	4.736e-01	1.744	7.10e-01	7.09e-01	6.05e-01
[2.7,3.76)	23	21	91.30	7.826e-01	4.319e-01	1.418	4.188e-01	0.99	8.433e-01	2.491			
[3.76,4.99)	27	25	92.59	1.045	5.868e-01	1.861	8.812e-01	0.80	4.791e-01	1.284			
[4.99,6.41)	26	24	92.31	1.147	6.467e-01	2.035	6.389e-01	0.53	3.313e-01	1.947			
≥ 6.41	26	23	88.46	8.593e-01	4.807e-01	1.536	6.088e-01	0.86	6.708e-01	2.850			
Quartiles													
< 2.92	32	29	90.62	----	----	----	----	1.14	6.626e-01	1.744	6.44e-01	6.35e-01	6.47e-01
[2.92,4.3)	30	27	90.00	8.768e-01	5.147e-01	1.494	6.287e-01	0.86	7.173e-01	2.078			
[4.3,5.73)	33	30	90.91	1.232	7.380e-01	2.057	4.249e-01	0.57	4.791e-01	1.446			
≥ 5.73	33	30	90.91	9.817e-01	5.881e-01	1.639	9.437e-01	0.90	6.708e-01	2.127			
Tertiles													
< 3.51	43	38	88.37	----	----	----	----	1.33	7.502e-01	2.070	3.78e-01	3.68e-01	3.73e-01
[3.51,5.35)	42	39	92.86	1.379	8.759e-01	2.172	1.651e-01	0.72	5.010e-01	9.391e-01			
≥ 5.35	43	39	90.70	1.122	7.168e-01	1.755	6.154e-01	0.95	6.708e-01	2.031			
Profile Likelihood													
< 3.9	52	46	88.46	----	----	----	----	0.99	7.502e-01	1.744	1.10e-01	1.13e-01	3.01e-02
≥ 3.9	76	70	92.11	1.355	9.303e-01	1.973	1.134e-01	0.84	6.186e-01	1.035			
Quantitative													
	128	116	90.62	1.004	0.9425	1.070	9.007e-01				9.009e-01	9.007e-01	

Cohort: Derivation
Outcome: Progression Free Survival by CPI (Lung Transplant counts as event)
Predictor: ICAM1 (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles											3.88e-01	3.57e-01	2.17e-01
< 158	27	24	88.89	----	----	----	----	1.11	5.010e-01	2.070			
[158,205)	26	22	84.62	1.030	5.759e-01	1.840	9.218e-01	0.86	7.091e-01	2.127			
[205,252)	27	24	88.89	1.118	6.337e-01	1.971	7.009e-01	0.75	4.079e-01	2.502			
[252,351)	27	26	96.30	1.514	8.666e-01	2.645	1.451e-01	0.77	4.408e-01	1.333			
≥ 351	28	26	92.86	8.580e-01	4.854e-01	1.517	5.983e-01	0.93	8.241e-01	2.352			
Quartiles											5.49e-01	5.43e-01	3.48e-01
< 175	32	28	87.50	----	----	----	----	1.05	7.091e-01	2.070			
[175,230)	35	32	91.43	1.389	8.347e-01	2.312	2.059e-01	0.79	6.186e-01	1.235			
[230,318)	33	29	87.88	1.169	6.949e-01	1.966	5.566e-01	0.91	4.079e-01	2.031			
≥ 318	35	33	94.29	1.012	6.063e-01	1.690	9.632e-01	0.93	6.626e-01	1.947			
Tertiles											5.31e-01	5.25e-01	5.29e-01
< 197	46	40	86.96	----	----	----	----	0.92	8.049e-01	1.703			
[197,274)	43	39	90.70	1.286	8.268e-01	2.000	2.643e-01	0.75	5.749e-01	1.333			
≥ 274	46	43	93.48	1.089	7.038e-01	1.684	7.028e-01	0.91	6.407e-01	1.673			
Profile Likelihood											2.08e-01	2.20e-01	2.08e-02
<351.5	107	96	89.72	----	----	----	----	0.86	7.010e-01	1.112			
≥351.5	28	26	92.86	7.543e-01	4.806e-01	1.184	2.202e-01	0.93	8.241e-01	2.352			
Quantitative	135	122	90.37	1.000	9.987e-01	1.001	9.319e-01				9.320e-01	9.319e-01	

Cohort: **Derivation**

Outcome: **Progression Free Survival by CPI (Lung Transplant counts as event)**

Predictor: **IL8 (ng / mL)**

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 0.0051	25	22	88.00	----	----	----	----	1.11	4.983e-01	1.744	3.30e-02	2.54e-02	1.42e-01
[0.0051,0.00776)	27	21	77.78	1.732	9.765e-01	3.072	6.031e-02	1.28	9.500e-01				
[0.00776,0.00968)	28	27	96.43	6.726e-01	3.661e-01	1.236	2.013e-01	0.84	4.081e-01	2.519			
[0.00968,0.013)	27	26	96.30	9.393e-01	5.332e-01	1.655	8.284e-01	0.86	6.708e-01	1.703			
≥ 0.013	28	26	92.86	1.163	6.576e-01	2.058	6.031e-01	0.53	1.477e-01	1.087			
Quartiles													
< 0.0056	32	28	87.50	----	----	----	----	1.11	4.983e-01	1.648	4.35e-04	5.99e-04	2.31e-03
[0.0056,0.0087)	31	25	80.65	1.602	9.823e-01	2.613	5.898e-02	2.03	9.856e-01	4.085			
[0.0087,0.011)	29	29	100.00	5.395e-01	3.092e-01	9.413e-01	2.979e-02	0.79	5.830e-01	1.714			
≥ 0.011	43	40	93.02	1.196	7.087e-01	2.017	5.030e-01	0.67	3.450e-01	9.391e-01			
Tertiles													
< 0.0066	41	35	85.37	----	----	----	----	1.28	4.983e-01	1.744	1.58e-02	1.19e-02	7.83e-02
[0.0066,0.00997)	48	44	91.67	8.798e-01	5.601e-01	1.382	5.784e-01	0.86	7.940e-01	2.341			
≥ 0.00997	46	43	93.48	1.649	1.049	2.592	3.019e-02	0.84	3.587e-01	9.774e-01			
Profile Likelihood													
< 0.0084	60	50	83.33	----	----	----	----	1.28	9.062e-01	2.034	5.17e-04	5.39e-04	3.38e-03
≥ 0.0084	75	72	96.00	1.927	1.323	2.809	6.360e-04	0.79	5.830e-01	8.624e-01			
Quantitative*	135	122	90.37	1.020	1.003	1.037	2.401e-02				5.725e-02	2.248e-02	

*Units of pg / mL were used in **Quantitative model only**.

Cohort: Derivation

Outcome: Progression Free Survival by CPI (Lung Transplant counts as event)

Predictor: VCAM1 (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 335	26	23	88.46	----	----	----	----	0.99	6.186e-01	1.744	1.45e-01	1.65e-01	1.37e-01
[335,402)	27	25	92.59	6.208e-01	3.481e-01	1.107	1.062e-01	2.03	9.062e-01	2.664			
[402,457)	29	25	86.21	1.104	6.232e-01	1.957	7.335e-01	0.67	4.791e-01	1.035			
[457,572)	28	26	92.86	1.212	6.875e-01	2.136	5.063e-01	0.48	3.450e-01	1.596			
≥ 572	25	23	92.00	9.592e-01	5.348e-01	1.720	8.888e-01	0.95	8.350e-01	2.127			
Quartiles													
< 359	34	31	91.18	----	----	----	----	1.14	7.392e-01	1.744	9.14e-02	9.96e-02	1.48e-01
[359,419)	32	28	87.50	6.799e-01	4.030e-01	1.147	1.481e-01	1.03	8.049e-01	2.645			
[419,518)	37	34	91.89	1.271	7.776e-01	2.076	3.390e-01	0.49	4.079e-01	1.087			
≥ 518	32	29	90.62	1.109	6.661e-01	1.846	6.912e-01	0.86	5.284e-01	1.947			
Tertiles													
< 378	46	41	89.13	----	----	----	----	1.14	8.049e-01	1.703	9.12e-01	9.14e-01	6.55e-01
[378,480)	45	41	91.11	1.055	6.790e-01	1.639	8.118e-01	0.70	4.791e-01	1.112			
≥ 480	44	40	90.91	1.100	7.100e-01	1.705	6.691e-01	0.93	6.708e-01	1.714			
Profile Likelihood													
< 418.0	66	59	89.39	----	----	----	----	1.14	8.433e-01	1.744	4.40e-02	4.31e-02	1.15e-01
≥ 418.0	69	63	91.30	1.448	1.010	2.078	4.410e-02	0.75	4.791e-01	9.500e-01			
Quantitative	135	122	90.37	1.001	9.997e-01	1.002	1.872e-01				2.038e-01	1.871e-01	

Cohort: Derivation
Outcome: Progression Free Survival by CPI (Lung Transplant counts as event)
Predictor: S100A12 (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 15	26	23	88.46	----	----	----	----	1.37	8.049e-01	2.519	1.27e-02	4.51e-03	1.55e-02
[15,21.6)	29	23	79.31	1.217	6.795e-01	2.181	5.087e-01	0.95	7.010e-01	2.300			
[21.6,29)	26	24	92.31	1.100	6.188e-01	1.956	7.454e-01	1.28	7.091e-01	2.431			
[29,51)	26	26	100.00	2.688	1.503	4.809	8.607e-04	0.63	4.079e-01	8.624e-01			
≥ 51	28	26	92.86	1.351	7.649e-01	2.385	3.001e-01	0.94	3.313e-01	2.127			
Quartiles													
< 17.8	34	31	91.18	----	----	----	----	0.95	8.433e-01	2.070	5.14e-02	4.40e-02	6.30e-02
[17.8,25)	34	26	76.47	8.777e-01	5.204e-01	1.480	6.249e-01	1.33	7.010e-01	2.300			
[25,45.2)	34	34	100.00	1.714	1.047	2.804	3.203e-02	0.69	4.983e-01	9.062e-01			
≥ 45.2	33	31	93.94	1.303	7.877e-01	2.157	3.024e-01	0.90	3.614e-01	1.473			
Tertiles													
< 19	39	35	89.74	----	----	----	----	0.95	8.350e-01	2.070	1.42e-01	1.28e-01	1.20e-01
[19,37)	51	44	86.27	9.953e-01	6.375e-01	1.554	9.834e-01	0.99	7.010e-01	1.744			
≥ 37	45	43	95.56	1.471	9.371e-01	2.309	9.342e-02	0.79	4.983e-01	9.391e-01			
Profile Likelihood													
< 25.5	71	60	84.51	----	----	----	----	1.14	8.624e-01	1.947	3.79e-03	3.28e-03	2.21e-03
≥ 25.5	64	62	96.88	1.707	1.190	2.448	3.637e-03	0.71	4.983e-01	9.062e-01			
Quantitative													
	135	122	90.37	1.001	9.976e-01	1.005	4.744e-01				4.916e-01	4.738e-01	

Cohort: Validation
Outcome: Mortality
Predictor: Age (years)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 61.6	20	3	15.00	----	----	----	----	0.00	4.087		1.04e-03	2.02e-03	3.34e-02
[61.6,66.5)	20	9	45.00	7.026	1.863	2.649e+01	3.991e-03	1.18	5.940e-01				
[66.5,70.1)	20	8	40.00	4.109	1.079	1.565e+01	3.832e-02	2.05	1.008				
[70.1,77.1)	20	9	45.00	4.411	1.171	1.662e+01	2.830e-02	2.34	1.322				
≥ 77.1	21	14	66.67	9.615	2.677	3.454e+01	5.217e-04	1.55	9.363e-01				
Quartiles													
< 62.8	25	5	20.00	----	----	----	----	0.00	4.087		1.83e-02	3.37e-02	1.45e-01
[62.8,68.4)	25	11	44.00	3.980	1.355	1.168e+01	1.196e-02	2.05	1.008				
[68.4,75)	25	11	44.00	2.911	1.001	8.468	4.977e-02	2.34	1.128				
≥ 75	26	16	61.54	3.915	1.415	1.084e+01	8.596e-03	1.91	1.511				
Tertiles													
< 65.3	34	9	26.47	----	----	----	----	4.09	2.199		4.84e-02	6.07e-02	2.93e-01
[65.3,72.8)	33	15	45.45	2.192	9.517e-01	5.047	6.523e-02	2.05	1.008				
≥ 72.8	34	19	55.88	2.511	1.123	5.614	2.491e-02	1.91	1.511				
Profile Likelihood													
<61.8	21	4	19.05	----	----	----	----	0.00	4.087		1.14e-03	3.29e-03	1.20e-01
≥61.8	80	39	48.75	4.255	1.498	1.209e+01	6.543e-03	1.93	1.322	2.888			
Quantitative													
	101	43	42.57	1.058	1.018	1.099	4.336e-03				2.647e-03	3.977e-03	
Predictor: Gender													
Female	36	12	33.33	----	----	----	----	3.56	2.340				
Male	65	31	47.69	1.83	0.931	3.583	7.98E-02	1.93	1.320		6.90E-02	7.56E-02	

Cohort: Validation
Outcome: Mortality
Predictor: Baseline (4-month) FVC % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 48.7	18	12	66.67	----	----	----	----	1.01	7.939e-01		3.05e-02	3.77e-02	8.99e-01
[48.7,54.9)	17	8	47.06	6.806e-01	2.767e-01	1.674	4.020e-01	2.37	1.128				
[54.9,62)	17	8	47.06	7.761e-01	3.068e-01	1.964	5.925e-01	1.55	9.363e-01				
[62,77.2)	18	5	27.78	3.318e-01	1.117e-01	9.851e-01	4.692e-02	0.00	1.914				
≥ 77.2	18	4	22.22	2.091e-01	6.571e-02	6.656e-01	8.069e-03	5.13	2.404				
Quartiles													
< 49.7	22	14	63.64	----	----	----	----	1.18	7.939e-01		6.63e-02	6.70e-02	9.41e-01
[49.7,58.2)	22	10	45.45	6.936e-01	3.027e-01	1.589	3.871e-01	2.37	9.363e-01				
[58.2,72.6)	22	7	31.82	4.772e-01	1.864e-01	1.222	1.230e-01	1.93	1.552				
≥ 72.6	22	6	27.27	2.946e-01	1.111e-01	7.810e-01	1.401e-02	5.13	2.199				
Tertiles													
< 51.8	29	16	55.17	----	----	----	----	1.18	9.884e-01		4.70e-03	8.38e-03	3.96e-01
[51.8,67.6)	30	14	46.67	9.203e-01	4.373e-01	1.937	8.268e-01	1.55	9.363e-01				
≥ 67.6	29	7	24.14	2.613e-01	1.006e-01	6.787e-01	5.852e-03	5.13	2.404				
Profile Likelihood													
< 69.0	60	31	51.67	----	----	----	----	1.55	1.008	3.565	2.89e-04	7.26e-04	6.27e-02
≥ 69.0	28	6	21.43	2.223e-01	8.583e-02	5.760e-01	1.962e-03	5.13	2.404				
Quantitative													
	88	37	42.05	9.698e-01	9.508e-01	9.893e-01	2.489e-03				1.699e-03	2.168e-03	

Cohort: Validation
Outcome: Mortality
Predictor: Baseline (4-month) DLco % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 30.1	17	9	52.94	----	----	----	----	0.99	4.353e-01		1.78e-02	3.37e-03	3.87e-01
[30.1,38.8)	16	7	43.75	3.987e-01	1.468e-01	1.083	7.129e-02	2.37	1.008				
[38.8,46)	16	7	43.75	2.457e-01	8.629e-02	6.993e-01	8.539e-03	1.93	1.563				
[46,62.2)	17	6	35.29	2.070e-01	7.142e-02	5.998e-01	3.713e-03	2.89	2.404				
≥ 62.2	17	4	23.53	1.596e-01	4.715e-02	5.406e-01	3.194e-03	5.13	1.552				
Quartiles													
< 31.7	21	10	47.62	----	----	----	----	1.13	5.940e-01		9.50e-03	7.92e-03	4.13e-01
[31.7,43.7)	20	10	50.00	9.239e-01	3.840e-01	2.223	8.597e-01	1.19	9.363e-01				
[43.7,56.5)	21	8	38.10	3.139e-01	1.188e-01	8.294e-01	1.942e-02	2.89	2.199				
≥ 56.5	21	5	23.81	2.252e-01	7.201e-02	7.041e-01	1.038e-02	4.30	4.301				
Tertiles													
< 34.6	28	13	46.43	----	----	----	----	1.13	8.350e-01		1.24e-02	1.24e-02	9.50e-01
[34.6,47.8)	27	14	51.85	5.602e-01	2.568e-01	1.222	1.453e-01	2.20	1.563				
≥ 47.8	28	6	21.43	2.402e-01	8.855e-02	6.518e-01	5.102e-03	4.30	2.404				
Profile Likelihood													
< 43.2	41	20	48.78	----	----	----	----	1.18	9.363e-01		8.70e-04	6.59e-04	2.44e-01
≥ 43.2	42	13	30.95	2.861e-01	1.331e-01	6.151e-01	1.355e-03	4.09	2.404				
Quantitative	83	33	39.76	9.615e-01	9.380e-01	9.856e-01	1.858e-03				5.392e-04	1.609e-03	

Cohort: Validation
Outcome: Mortality
Predictor: Baseline (4-month) CPI

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 41.2	17	3	17.65	----	----	----	----	5.13			2.77e-02	1.74e-02	6.27e-01
[41.2,50.9)	16	6	37.50	2.186	5.374e-01	8.893	2.746e-01	2.40	1.914				
[50.9,59.1)	17	7	41.18	2.361	6.079e-01	9.167	2.146e-01	4.09	1.185				
[59.1,65.3)	16	8	50.00	3.883	9.927e-01	1.519e+01	5.123e-02	2.37	9.363e-01				
≥ 65.3	17	9	52.94	7.022	1.838	2.682e+01	4.364e-03	1.01	4.353e-01				
Quartiles													
< 44.4	21	3	14.29	----	----	----	----	5.13			2.52e-03	2.67e-03	8.09e-01
[44.4,55.5)	20	8	40.00	2.113	5.527e-01	8.075	2.743e-01	4.09	1.914				
[55.5,64.1)	21	10	47.62	5.151	1.367	1.940e+01	1.542e-02	1.93	1.185				
≥ 64.1	21	12	57.14	7.368	1.992	2.725e+01	2.761e-03	1.01	4.353e-01				
Tertiles													
< 49.9	28	7	25.00	----	----	----	----	4.30	2.199		2.43e-02	2.05e-02	2.96e-01
[49.9,60.6)	27	12	44.44	1.809	7.092e-01	4.614	2.147e-01	2.37	1.914				
≥ 60.6	28	14	50.00	3.510	1.369	8.999	8.943e-03	1.13	9.363e-01				
Profile Likelihood													
<56.0	42	11	26.19	----	----	----	----	4.09	2.404		1.86e-04	1.66e-04	1.79e-01
≥56.0	41	22	53.66	4.216	1.870	9.506	5.227e-04	1.18	9.884e-01	3.565			
Quantitative	83	33	39.76	1.059	1.024	1.095	8.834e-04				1.994e-04	6.643e-04	

Cohort: Validation
Outcome: Mortality
Predictor: Baseline (3-month) FVC % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 48.9	15	9	60.00	----	----	----	----	1.01	5.940e-01		1.02e-02	9.02e-03	4.82e-01
[48.9,55.7)	15	5	33.33	4.843e-01	1.612e-01	1.455	1.964e-01	4.09	1.128				
[55.7,62)	13	8	61.54	9.650e-01	3.590e-01	2.594	9.438e-01	1.19	8.543e-01				
[62,76.7)	17	4	23.53	2.454e-01	7.150e-02	8.423e-01	2.557e-02	0.00	1.914				
≥ 76.7	15	3	20.00	1.611e-01	4.188e-02	6.194e-01	7.886e-03	5.13	2.404				
Quartiles													
< 49.7	19	10	52.63	----	----	----	----	1.18	9.884e-01		1.20e-01	1.29e-01	3.79e-01
[49.7,58.8)	18	8	44.44	9.007e-01	3.452e-01	2.351	8.308e-01	4.09	8.543e-01				
[58.8,73.3)	19	6	31.58	5.150e-01	1.807e-01	1.468	2.145e-01	1.93	1.552				
≥ 73.3	19	5	26.32	3.122e-01	1.045e-01	9.328e-01	3.711e-02	5.13	2.199				
Tertiles													
< 51.8	25	12	48.00	----	----	----	----	1.18	9.884e-01		1.95e-03	4.05e-03	1.88e-01
[51.8,68.1)	25	12	48.00	1.004	4.368e-01	2.307	9.927e-01	1.55	9.363e-01				
≥ 68.1	25	5	20.00	1.958e-01	6.205e-02	6.180e-01	5.423e-03	5.13	2.404				
Profile Likelihood													
< 62.3	46	23	50.00	----	----	----	----	1.19	9.884e-01		2.56e-04	4.32e-04	6.81e-02
≥ 62.3	29	6	20.69	2.032e-01	7.651e-02	5.398e-01	1.389e-03	5.13	2.404				
Quantitative													
	75	29	38.67	9.661e-01	9.454e-01	9.873e-01	1.856e-03				1.381e-03	1.545e-03	

Cohort: Validation
Outcome: Mortality
Predictor: Baseline (3-month) DLco % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 28.6	14	7	50.00	----	----	----	----	1.13	4.353e-01		2.67e-02	6.82e-03	4.87e-01
[28.6,38.3)	14	5	35.71	4.696e-01	1.478e-01	1.491	1.998e-01	1.19	1.008				
[38.3,46)	13	5	38.46	1.874e-01	5.472e-02	6.420e-01	7.690e-03	4.09	1.914				
[46,61.3)	15	6	40.00	2.363e-01	7.627e-02	7.323e-01	1.242e-02	2.89	2.404				
≥ 61.3	14	3	21.43	1.301e-01	3.152e-02	5.368e-01	4.800e-03	5.13					
Quartiles													
< 30.9	18	8	44.44	----	----	----	----	1.13	5.940e-01		5.59e-02	4.16e-02	6.86e-01
[30.9,43.8)	17	6	35.29	4.300e-01	1.402e-01	1.318	1.398e-01	1.91	1.008				
[43.8,55.1)	17	8	47.06	4.384e-01	1.612e-01	1.192	1.063e-01	2.89	2.199				
≥ 55.1	18	4	22.22	1.859e-01	5.295e-02	6.528e-01	8.654e-03	4.30	4.301				
Tertiles													
< 33.8	23	10	43.48	----	----	----	----	1.13	9.884e-01		1.77e-02	1.37e-02	9.53e-01
[33.8,47.4)	24	11	45.83	4.663e-01	1.908e-01	1.140	9.430e-02	2.20	1.563				
≥ 47.4	23	5	21.74	2.125e-01	6.953e-02	6.495e-01	6.587e-03	4.30	2.404				
Profile Likelihood													
< 39.5	29	13	44.83	----	----	----	----	1.13	9.363e-01		1.05e-03	3.81e-04	1.66e-01
≥ 39.5	41	13	31.71	2.415e-01	1.039e-01	5.613e-01	9.584e-04	4.09	2.404				
Quantitative													
	70	26	37.14	9.606e-01	9.347e-01	9.872e-01	3.904e-03				1.369e-03	3.463e-03	

Cohort: Validation
Outcome: Mortality
Predictor: Baseline (3-month) CPI

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 42.9	14	2	14.29	----	----	----	----	5.13			1.94e-02	1.57e-02	1.52e-01
[42.9,51.7)	14	6	42.86	3.247	6.322e-01	1.668e+01	1.583e-01	2.40	1.914				
[51.7,59.8)	14	5	35.71	2.188	4.227e-01	1.133e+01	3.506e-01	2.89	1.930				
[59.8,66)	14	7	50.00	8.416	1.639	4.321e+01	1.071e-02	1.01	5.940e-01				
≥ 66	14	6	42.86	7.865	1.497	4.133e+01	1.484e-02	1.13	9.884e-01				
Quartiles													
< 45.4	18	4	22.22	----	----	----	----	2.40	2.199		1.13e-03	2.46e-04	2.67e-01
[45.4,56)	17	5	29.41	1.059	2.775e-01	4.043	9.330e-01	4.09	1.914				
[56,64.8)	17	7	41.18	3.488	9.594e-01	1.268e+01	5.781e-02	1.93	1.185				
≥ 64.8	18	10	55.56	7.873	2.295	2.701e+01	1.035e-03	1.01	4.353e-01				
Tertiles													
< 50.3	23	7	30.43	----	----	----	----	2.40	2.199		9.18e-03	3.03e-03	1.38e-01
[50.3,62.2)	24	8	33.33	1.186	4.274e-01	3.292	7.430e-01	4.09	1.930				
≥ 62.2	23	11	47.83	4.213	1.543	1.150e+01	5.010e-03	1.01	5.940e-01				
Profile Likelihood													
<56.0	35	9	25.71	----	----	----	----	4.30	2.404		2.69e-04	2.06e-04	1.52e-01
≥56.0	35	17	48.57	5.004	1.957	1.280e+01	7.758e-04	1.18	9.884e-01				
Quantitative	70	26	37.14	1.064	1.024	1.106	1.601e-03				3.673e-04	1.210e-03	

Cohort: Validation
Outcome: Mortality
Predictor: MMP7Elisa (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 3.41	20	7	35.00	----	----	----	----	4.30	9.363e-01		9.12e-01	9.18e-01	8.45e-01
[3.41,4.56)	20	9	45.00	1.567	5.681e-01	4.324	3.854e-01	1.91	1.511				
[4.56,5.49)	20	11	55.00	1.315	5.071e-01	3.411	5.731e-01	2.89	9.884e-01				
[5.49,7.52)	20	7	35.00	1.344	4.594e-01	3.930	5.896e-01	0.00	1.008				
≥ 7.52	21	9	42.86	1.546	5.608e-01	4.262	3.998e-01	2.37	1.322				
Quartiles													
< 3.54	25	9	36.00	----	----	----	----	4.30	1.563		4.83e-01	4.86e-01	2.92e-01
[3.54,4.94)	25	12	48.00	1.808	7.543e-01	4.335	1.842e-01	1.93	1.914				
[4.94,6.46)	25	11	44.00	1.238	5.110e-01	2.999	6.363e-01	2.89	1.008				
≥ 6.46	26	11	42.31	1.757	7.142e-01	4.324	2.197e-01	1.55	1.180				
Tertiles													
< 3.99	34	12	35.29	----	----	----	----	4.30	1.563		5.51e-01	5.63e-01	3.90e-01
[3.99,5.91)	33	18	54.55	1.420	6.814e-01	2.961	3.491e-01	2.05	1.008				
≥ 5.91	34	13	38.24	1.466	6.604e-01	3.254	3.471e-01	2.37	1.185				
Profile Likelihood													
< 3.5	24	8	33.33	----	----	----	----	4.30	1.563		1.51e-01	1.68e-01	1.18e-01
≥ 3.5	77	35	45.45	1.715	7.899e-01	3.722	1.727e-01	2.20	1.511	3.565			
Quantitative													
	101	43	42.57	1.006	9.178e-01	1.104	8.916e-01				8.925e-01	8.916e-01	

Cohort: Validation
 Outcome: Mortality
 Predictor: ICAM (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 226	20	5	25.00	----	----	----	----	5.13			5.36e-02	4.66e-02	1.35e-01
[226,281)	20	9	45.00	1.282	4.261e-01	3.858	6.583e-01	2.89	2.199				
[281,326)	20	8	40.00	2.684	8.404e-01	8.574	9.560e-02	2.05	8.543e-01				
[326,419)	20	11	55.00	4.205	1.400	1.263e+01	1.048e-02	1.32	6.652e-01				
≥ 419	21	10	47.62	2.431	7.995e-01	7.395	1.174e-01	2.34	1.185				
Quartiles													
< 238	25	8	32.00	----	----	----	----	4.09	4.087		1.32e-02	1.14e-02	4.49e-02
[238,303)	25	8	32.00	8.661e-01	3.218e-01	2.331	7.759e-01	2.89	2.199				
[303,387)	25	14	56.00	3.157	1.273	7.830	1.309e-02	1.32	8.543e-01				
≥ 387	26	13	50.00	2.273	9.094e-01	5.683	7.894e-02	1.56	1.185				
Tertiles													
< 258	34	11	32.35	----	----	----	----	4.09	2.199		4.70e-02	5.29e-02	1.93e-01
[258,367)	33	14	42.42	1.943	8.601e-01	4.390	1.102e-01	1.93	1.322				
≥ 367	34	18	52.94	2.582	1.169	5.701	1.891e-02	1.55	9.884e-01				
Profile Likelihood													
<300.0	50	16	32.00	----	----	----	----	4.09	2.888		1.62e-03	1.65e-03	4.55e-03
≥300.0	51	27	52.94	2.851	1.441	5.640	2.616e-03	1.55	9.884e-01	2.404			
Quantitative	101	43	42.57	1.003	0.9998	1.005	6.758e-02				7.171e-02	6.585e-02	

Cohort: **Validation**
 Outcome: **Mortality**
 Predictor: **IL8 (ng / mL)**

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 0.00767	20	7	35.00	----	----	----	----	4.09	2.199		1.71e-01	1.72e-01	6.05e-01
[0.00767,0.0101)	20	7	35.00	2.274	7.812e-01	6.620	1.318e-01	2.37	1.930				
[0.0101,0.0131)	19	8	42.11	2.185	7.625e-01	6.263	1.456e-01	4.92	5.532e-01				
[0.0131,0.0178)	20	9	45.00	3.177	1.147	8.804	2.621e-02	1.56	8.543e-01				
≥ 0.0178	20	12	60.00	1.472	4.771e-01	4.541	5.013e-01	1.55	9.363e-01				
Quartiles													
< 0.00825	25	8	32.00	----	----	----	----	4.09	2.199		3.60e-02	3.89e-02	1.86e-01
[0.00825,0.0112)	24	10	41.67	1.816	6.736e-01	4.897	2.383e-01	2.05	1.180				
[0.0112,0.0164)	25	9	36.00	3.612	1.427	9.145	6.728e-03	4.30	8.350e-01				
≥ 0.0164	25	16	64.00	2.556	9.249e-01	7.064	7.038e-02	1.55	9.884e-01				
Tertiles													
< 0.00959	33	9	27.27	----	----	----	----	5.13	2.199		1.08e-02	1.59e-02	6.81e-02
[0.00959,0.015)	33	15	45.45	3.160	1.368	7.302	7.077e-03	2.05	1.180				
≥ 0.015	33	19	57.58	2.682	1.127	6.383	2.574e-02	1.55	9.884e-01				
Profile Likelihood													
< 0.0097	34	9	26.47	----	----	----	----	5.13	4.087		1.80e-03	2.97e-03	1.33e-02
≥ 0.0097	65	34	52.31	3.071	1.411	6.682	4.673e-03	1.91	1.180	2.888			
Quantitative*													
	99	43	43.43	1.030	1.005	1.056	1.670e-02				4.863e-02	1.693e-02	

*Units of pg / mL were used in **Quantitative model only**.

Cohort: Validation
Outcome: Mortality
Predictor: VCAM (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 222	20	8	40.00	----	----	----	----	2.89	1.008		3.40e-01	3.25e-01	2.64e-01
[222,260)	20	11	55.00	1.646	6.494e-01	4.172	2.937e-01	1.19	7.995e-01				
[260,310)	20	6	30.00	6.746e-01	2.310e-01	1.969	4.714e-01	4.09	2.371				
[310,376)	20	9	45.00	8.410e-01	3.233e-01	2.188	7.226e-01	2.05	1.552				
≥ 376	21	9	42.86	1.466	5.514e-01	3.895	4.434e-01	2.34	1.563				
Quartiles													
< 230	25	11	44.00	----	----	----	----	2.20	1.008		9.71e-01	9.71e-01	9.67e-01
[230,285)	25	12	48.00	1.024	4.472e-01	2.346	9.550e-01	4.09	9.884e-01				
[285,358)	25	10	40.00	8.439e-01	3.544e-01	2.009	7.013e-01	2.37	1.552				
≥ 358	26	10	38.46	9.226e-01	3.911e-01	2.176	8.541e-01	2.34	1.563				
Tertiles													
< 246	34	16	47.06	----	----	----	----	1.13	8.350e-01		2.93e-01	2.94e-01	2.59e-01
[246,334)	33	12	36.36	5.494e-01	2.576e-01	1.172	1.213e-01	2.37	1.930				
≥ 334	34	15	44.12	7.790e-01	3.839e-01	1.581	4.890e-01	2.34	1.511				
Profile Likelihood													
<246.8	34	16	47.06	----	----	----	----	1.13	8.350e-01		1.99e-01	1.87e-01	1.09e-01
≥246.8	67	27	40.30	6.590e-01	3.530e-01	1.230	1.903e-01	2.37	1.930				
Quantitative	101	43	42.57	0.9998	0.9968	1.003	8.905e-01				8.900e-01	8.905e-01	

Cohort: Validation
Outcome: Mortality
Predictor: S100A12 (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 36.6	20	8	40.00	----	----	----	----	1.93	1.322		1.13e-01	9.98e-02	4.55e-02
[36.6,49.2)	20	4	20.00	8.296e-01	3.149e-01	2.186	7.054e-01	3.56	2.045				
[49.2,65.9)	20	9	45.00	4.521e-01	1.348e-01	1.516	1.984e-01	2.34	1.128				
[65.9,105)	20	12	60.00	1.097	4.186e-01	2.876	8.503e-01	1.18	7.939e-01				
≥ 105	21	10	47.62	1.866	7.550e-01	4.609	1.766e-01	4.09	9.884e-01				
Quartiles													
< 39.7	25	10	40.00	----	----	----	----	2.05	1.563		7.85e-01	7.83e-01	6.55e-01
[39.7,54.5)	25	8	32.00	8.132e-01	3.192e-01	2.072	6.648e-01	2.37	2.199				
[54.5,82.8)	25	12	48.00	1.297	5.553e-01	3.029	5.481e-01	1.91	1.128				
≥ 82.8	26	13	50.00	1.059	4.526e-01	2.478	8.948e-01	1.55	9.884e-01				
Tertiles													
< 43.9	34	11	32.35	----	----	----	----	3.56	1.930		3.71e-01	3.68e-01	3.72e-01
[43.9,72.3)	33	14	42.42	1.289	5.822e-01	2.854	5.313e-01	2.37	1.914				
≥ 72.3	34	18	52.94	1.719	7.989e-01	3.697	1.658e-01	1.19	9.884e-01				
Profile Likelihood													
< 49.1	40	12	30.00	----	----	----	----	2.40	2.045		1.27e-01	1.35e-01	1.75e-01
≥ 49.1	61	31	50.82	1.663	8.471e-01	3.266	1.394e-01	1.91	1.128				
Quantitative	101	43	42.57	1.002	0.9967	1.007	4.578e-01				4.708e-01	4.573e-01	

Cohort: Validation
Outcome: Transplant Free Survival
Predictor: Age (years)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 61.6	20	9	45.00	----	----	----	----	4.05	1.927		9.22e-03	7.53e-03	7.39e-04
[61.6,66.5)	20	17	85.00	3.927	1.720	8.966	1.163e-03	0.59	4.519e-01	2.199			
[66.5,70.1)	20	13	65.00	2.168	9.164e-01	5.127	7.819e-02	1.01	6.515e-01				
[70.1,77.1)	20	10	50.00	1.519	6.078e-01	3.797	3.709e-01	2.34	1.128				
≥ 77.1	21	14	66.67	2.826	1.187	6.725	1.886e-02	1.55	9.363e-01				
Quartiles													
< 62.8	25	12	48.00	----	----	----	----	3.98	1.136		5.28e-02	4.35e-02	5.40e-02
[62.8,68.4)	25	20	80.00	2.750	1.321	5.723	6.834e-03	0.68	5.285e-01	2.199			
[68.4,75)	25	15	60.00	1.618	7.493e-01	3.495	2.204e-01	1.32	8.350e-01				
≥ 75	26	16	61.54	1.583	7.397e-01	3.389	2.366e-01	1.91	1.511				
Tertiles													
< 65.3	34	20	58.82	----	----	----	----	1.93	6.845e-01		4.56e-01	4.48e-01	5.26e-01
[65.3,72.8)	33	23	69.70	1.466	8.004e-01	2.686	2.153e-01	1.01	5.285e-01				
≥ 72.8	34	20	58.82	1.154	6.154e-01	2.165	6.548e-01	1.91	1.511				
Profile Likelihood													
<61.8	21	10	47.62	----	----	----	----	3.98	1.136		1.67e-02	2.36e-02	3.04e-03
≥61.8	80	53	66.25	2.188	1.094	4.374	2.675e-02	1.32	9.363e-01	2.045			
Quantitative													
	101	63	62.38	1.009	9.812e-01	1.037	5.373e-01				5.342e-01	5.373e-01	
Predictor: Gender													
Female	36	18	50.00	----	----	----	----	2.37	1.933				
Male	65	45	69.23	1.73	0.997	3.013	5.13E-02	1.19	0.835	1.93	4.38E-02	4.86E-02	

Cohort: Validation
Outcome: Transplant Free Survival
Predictor: Baseline (4-month) FVC % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 48.7	18	14	77.78	----	----	----	----	0.99	5.258e-01		6.45e-02	8.35e-02	8.69e-01
[48.7,54.9)	17	14	82.35	9.593e-01	4.518e-01	2.037	9.139e-01	1.13	4.764e-01				
[54.9,62)	17	11	64.71	8.544e-01	3.805e-01	1.919	7.030e-01	1.14	8.543e-01				
[62,77.2)	18	9	50.00	5.308e-01	2.251e-01	1.252	1.479e-01	1.93	6.515e-01				
≥ 77.2	18	7	38.89	3.270e-01	1.304e-01	8.203e-01	1.721e-02	2.40	2.199				
Quartiles													
< 49.7	22	17	77.27	----	----	----	----	1.01	5.940e-01	3.565	9.60e-02	1.06e-01	9.07e-01
[49.7,58.2)	22	17	77.27	9.314e-01	4.683e-01	1.852	8.393e-01	0.85	6.652e-01				
[58.2,72.6)	22	11	50.00	6.182e-01	2.849e-01	1.342	2.238e-01	1.55	6.515e-01				
≥ 72.6	22	10	45.45	4.161e-01	1.886e-01	9.180e-01	2.986e-02	2.20	1.927				
Tertiles													
< 51.8	29	23	79.31	----	----	----	----	0.99	5.258e-01	2.888	4.81e-03	7.36e-03	2.19e-01
[51.8,67.6)	30	20	66.67	8.745e-01	4.731e-01	1.616	6.687e-01	1.14	6.845e-01				
≥ 67.6	29	12	41.38	3.402e-01	1.642e-01	7.047e-01	3.711e-03	2.40	1.927				
Profile Likelihood													
< 69.0	60	44	73.33	----	----	----	----	1.01	6.845e-01	1.930	4.93e-04	9.38e-04	3.38e-02
≥ 69.0	28	11	39.29	3.286e-01	1.645e-01	6.564e-01	1.621e-03	2.40	1.933				
Quantitative													
	88	55	62.50	9.783e-01	9.629e-01	9.940e-01	6.903e-03				5.681e-03	6.494e-03	

Cohort: Validation
Outcome: Transplant Free Survival
Predictor: Baseline (4-month) DLco % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 30.1	17	16	94.12	----	----	----	----	0.44	3.068e-01	1.128	1.93e-05	1.04e-06	5.04e-01
[30.1,38.8)	16	13	81.25	4.673e-01	2.216e-01	9.851e-01	4.557e-02	1.14	6.515e-01				
[38.8,46)	16	9	56.25	2.067e-01	8.725e-02	4.898e-01	3.409e-04	1.91	9.363e-01				
[46,62.2)	17	8	47.06	1.798e-01	7.490e-02	4.316e-01	1.225e-04	2.40	2.199				
≥ 62.2	17	4	23.53	1.020e-01	3.309e-02	3.142e-01	6.994e-05	5.13	1.552				
Quartiles													
< 31.7	21	19	90.48	----	----	----	----	0.59	3.068e-01	1.927	1.66e-05	8.70e-06	9.95e-02
[31.7,43.7)	20	15	75.00	7.852e-01	3.958e-01	1.558	4.891e-01	1.01	5.285e-01	3.565			
[43.7,56.5)	21	9	42.86	2.083e-01	9.128e-02	4.752e-01	1.933e-04	2.89	2.199				
≥ 56.5	21	7	33.33	1.828e-01	7.318e-02	4.566e-01	2.740e-04	4.30	1.933				
Tertiles													
< 34.6	28	25	89.29	----	----	----	----	0.65	3.231e-01	1.180	2.18e-05	8.30e-06	6.71e-01
[34.6,47.8)	27	17	62.96	3.815e-01	2.020e-01	7.204e-01	2.968e-03	1.93	9.363e-01				
≥ 47.8	28	8	28.57	1.763e-01	7.777e-02	3.996e-01	3.225e-05	4.30	1.933				
Profile Likelihood													
< 41.7	39	33	84.62	----	----	----	----	0.67	5.258e-01	1.136	4.66e-07	1.97e-07	5.58e-02
≥ 41.7	44	17	38.64	2.157e-01	1.146e-01	4.058e-01	1.968e-06	2.89	1.933				
Quantitative													
	83	50	60.24	9.540e-01	9.342e-01	9.743e-01	1.146e-05				6.892e-07	8.256e-06	

Cohort: Validation
Outcome: Transplant Free Survival
Predictor: Baseline (4-month) CPI

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 41.2	17	4	23.53	----	----	----	----	5.13	1.933		1.33e-03	9.37e-04	5.49e-01
[41.2,50.9)	16	8	50.00	2.181	6.513e-01	7.306	2.060e-01	2.20	1.552				
[50.9,59.1)	17	11	64.71	2.806	8.907e-01	8.841	7.802e-02	1.93	6.652e-01				
[59.1,65.3)	16	13	81.25	4.667	1.492	1.460e+01	8.095e-03	0.94	5.940e-01				
≥ 65.3	17	14	82.35	7.294	2.357	2.257e+01	5.647e-04	0.47	3.068e-01				
Quartiles													
< 44.4	21	5	23.81	----	----	----	----	5.13	1.933		5.24e-05	5.69e-05	4.31e-01
[44.4,55.5)	20	10	50.00	1.618	5.468e-01	4.791	3.845e-01	2.40	1.552				
[55.5,64.1)	21	17	80.95	5.072	1.826	1.409e+01	1.837e-03	1.14	6.515e-01	2.371			
≥ 64.1	21	18	85.71	6.142	2.217	1.701e+01	4.790e-04	0.59	3.068e-01				
Tertiles													
< 49.9	28	10	35.71	----	----	----	----	2.40	1.933		5.13e-04	2.63e-04	2.79e-01
[49.9,60.6)	27	16	59.26	1.708	7.730e-01	3.772	1.857e-01	1.93	1.136				
≥ 60.6	28	24	85.71	4.036	1.889	8.621	3.145e-04	0.65	4.353e-01	1.180			
Profile Likelihood													
<56.0	42	15	35.71	----	----	----	----	4.09	2.199		9.90e-07	8.36e-07	8.01e-02
≥56.0	41	35	85.37	4.560	2.356	8.826	6.678e-06	0.94	5.285e-01	1.185			
Quantitative	83	50	60.24	1.062	1.033	1.092	1.752e-05				1.472e-06	1.100e-05	

Cohort: Validation
Outcome: Transplant Free Survival
Predictor: Baseline (3-month) FVC % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 48.9	15	11	73.33	----	----	----	----	0.99	5.258e-01		8.09e-02	9.23e-02	9.20e-01
[48.9,55.7)	15	11	73.33	8.253e-01	3.517e-01	1.937	6.590e-01	1.15	4.764e-01				
[55.7,62)	13	9	69.23	8.333e-01	3.385e-01	2.051	6.916e-01	0.94	4.710e-01				
[62,76.7)	17	8	47.06	4.455e-01	1.753e-01	1.132	8.930e-02	1.93	1.511				
≥ 76.7	15	6	40.00	2.983e-01	1.083e-01	8.215e-01	1.926e-02	2.40	2.199				
Quartiles													
< 49.7	19	13	68.42	----	----	----	----	1.01	5.940e-01		1.36e-01	1.38e-01	4.16e-01
[49.7,58.8)	18	14	77.78	1.138	5.226e-01	2.480	7.441e-01	0.85	4.710e-01				
[58.8,73.3)	19	9	47.37	6.217e-01	2.614e-01	1.479	2.822e-01	1.55	6.515e-01				
≥ 73.3	19	9	47.37	4.661e-01	1.970e-01	1.103	8.240e-02	2.20	1.927				
Tertiles													
< 51.8	25	19	76.00	----	----	----	----	0.99	5.940e-01		4.76e-03	6.93e-03	2.01e-01
[51.8,68.1)	25	16	64.00	8.292e-01	4.194e-01	1.640	5.903e-01	1.19	5.285e-01				
≥ 68.1	25	10	40.00	3.002e-01	1.342e-01	6.714e-01	3.392e-03	2.40	1.933				
Profile Likelihood													
< 62.3	46	33	71.74	----	----	----	----	0.99	5.940e-01	2.888	1.01e-03	1.34e-03	6.91e-02
≥ 62.3	29	12	41.38	3.390e-01	1.698e-01	6.765e-01	2.152e-03	2.40	1.930				
Quantitative													
	75	45	60.00	9.766e-01	9.599e-01	9.935e-01	6.985e-03				6.142e-03	6.560e-03	

Cohort: Validation
Outcome: Transplant Free Survival
Predictor: Baseline (3-month) DLco % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 28.6	14	13	92.86	----	----	----	----	0.37	2.847e-01		1.26e-05	8.70e-07	2.99e-01
[28.6,38.3)	14	11	78.57	5.956e-01	2.635e-01	1.347	2.132e-01	0.77	5.940e-01				
[38.3,46)	13	6	46.15	1.428e-01	5.054e-02	4.035e-01	2.399e-04	4.09	1.563				
[46,61.3)	15	7	46.67	1.747e-01	6.713e-02	4.545e-01	3.482e-04	2.89	2.199				
≥ 61.3	14	3	21.43	8.222e-02	2.224e-02	3.040e-01	1.804e-04	5.13					
Quartiles													
< 30.9	18	16	88.89	----	----	----	----	0.53	3.068e-01	1.927	2.03e-04	5.27e-05	6.99e-01
[30.9,43.8)	17	11	64.71	4.576e-01	2.056e-01	1.018	5.538e-02	1.01	5.285e-01				
[43.8,55.1)	17	8	47.06	2.484e-01	1.045e-01	5.904e-01	1.616e-03	2.89	2.199				
≥ 55.1	18	5	27.78	1.383e-01	4.925e-02	3.886e-01	1.743e-04	4.30	1.933				
Tertiles													
< 33.8	23	20	86.96	----	----	----	----	0.65	3.068e-01	1.927	3.50e-05	1.06e-05	7.68e-01
[33.8,47.4)	24	14	58.33	3.367e-01	1.651e-01	6.867e-01	2.756e-03	1.93	1.185				
≥ 47.4	23	6	26.09	1.447e-01	5.627e-02	3.721e-01	6.043e-05	4.30	2.404				
Profile Likelihood													
< 39.5	29	25	86.21	----	----	----	----	0.65	4.600e-01	1.180	1.75e-07	1.90e-08	2.18e-02
≥ 39.5	41	15	36.59	1.654e-01	8.183e-02	3.343e-01	5.402e-07	2.89	2.199				
Quantitative	70	40	57.14	9.496e-01	9.273e-01	9.723e-01	1.870e-05				1.098e-06	1.355e-05	

Cohort: Validation
Outcome: Transplant Free Survival
Predictor: Baseline (3-month) CPI

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 42.9	14	3	21.43	----	----	----	----	5.13	1.933		3.18e-04	1.46e-04	6.09e-02
[42.9,51.7)	14	7	50.00	2.452	6.215e-01	9.676	2.002e-01	2.40	1.914				
[51.7,59.8)	14	7	50.00	2.044	5.266e-01	7.933	3.015e-01	2.89	1.927				
[59.8,66)	14	12	85.71	8.211	2.224	3.031e+01	1.578e-03	0.71	5.258e-01				
≥ 66	14	11	78.57	8.051	2.165	2.995e+01	1.857e-03	0.73	3.068e-01				
Quartiles													
< 45.4	18	5	27.78	----	----	----	----	2.40	2.199		5.25e-06	2.27e-06	1.26e-01
[45.4,56)	17	6	35.29	1.021	3.054e-01	3.411	9.735e-01	4.09	1.914				
[56,64.8)	17	14	82.35	5.191	1.784	1.511e+01	2.515e-03	0.94	6.515e-01				
≥ 64.8	18	15	83.33	7.894	2.722	2.289e+01	1.426e-04	0.53	3.068e-01				
Tertiles													
< 50.3	23	8	34.78	----	----	----	----	2.40	1.933		4.69e-05	6.23e-06	2.40e-01
[50.3,62.2)	24	12	50.00	1.547	6.298e-01	3.800	3.413e-01	1.93	1.563				
≥ 62.2	23	20	86.96	5.700	2.418	1.344e+01	6.951e-05	0.59	3.068e-01	1.180			
Profile Likelihood													
<56.0	35	11	31.43	----	----	----	----	4.09	2.404		3.40e-07	2.66e-07	3.47e-02
≥56.0	35	29	82.86	6.243	2.830	1.377e+01	5.693e-06	0.94	5.258e-01	1.563			
Quantitative	70	40	57.14	1.071	1.038	1.106	2.394e-05				1.442e-06	1.435e-05	

Cohort: Validation
Outcome: Transplant Free Survival
Predictor: MMP7Elisa (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 3.41	20	8	40.00	----	----	----	----	4.30	9.363e-01		2.05e-01	2.14e-01	5.43e-01
[3.41,4.56)	20	12	60.00	1.776	7.117e-01	4.434	2.182e-01	1.56	1.128				
[4.56,5.49)	20	13	65.00	1.399	5.775e-01	3.390	4.569e-01	2.20	5.258e-01				
[5.49,7.52)	20	13	65.00	2.161	8.755e-01	5.333	9.463e-02	1.01	4.764e-01				
≥ 7.52	21	17	80.95	2.566	1.084	6.078	3.216e-02	1.18	6.515e-01	2.404			
Quartiles													
< 3.54	25	10	40.00	----	----	----	----	4.30	1.511		3.79e-02	3.94e-02	1.14e-01
[3.54,4.94)	25	15	60.00	2.008	8.958e-01	4.502	9.048e-02	1.91	6.845e-01				
[4.94,6.46)	25	17	68.00	1.765	8.056e-01	3.865	1.557e-01	1.93	5.258e-01				
≥ 6.46	26	21	80.77	2.949	1.369	6.350	5.730e-03	1.18	6.515e-01	2.371			
Tertiles													
< 3.99	34	15	44.12	----	----	----	----	2.34	1.136		2.87e-02	2.55e-02	1.09e-01
[3.99,5.91)	33	22	66.67	1.437	7.430e-01	2.778	2.816e-01	1.93	6.790e-01	4.087			
≥ 5.91	34	26	76.47	2.344	1.228	4.474	9.774e-03	1.18	5.285e-01	2.371			
Profile Likelihood													
< 3.5	24	9	37.50	----	----	----	----	4.30	1.563		1.00e-02	1.58e-02	4.01e-02
≥ 3.5	77	54	70.13	2.337	1.149	4.756	1.917e-02	1.19	8.350e-01	2.045			
Quantitative													
	101	63	62.38	1.058	9.950e-01	1.125	7.161e-02				9.255e-02	6.968e-02	

Cohort: Validation
Outcome: Transplant Free Survival
Predictor: ICAM (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 226	20	8	40.00	----	----	----	----	5.13	1.008		6.28e-03	5.68e-03	7.64e-02
[226,281)	20	11	55.00	9.929e-01	3.967e-01	2.485	9.879e-01	2.89	1.180				
[281,326)	20	11	55.00	2.241	8.736e-01	5.750	9.316e-02	1.91	6.845e-01				
[326,419)	20	16	80.00	3.669	1.520	8.855	3.827e-03	0.67	5.202e-01				
≥ 419	21	17	80.95	2.482	1.044	5.899	3.959e-02	1.19	6.790e-01				
Quartiles													
< 238	25	11	44.00	----	----	----	----	4.09	1.008		8.39e-04	7.76e-04	2.29e-02
[238,303)	25	11	44.00	9.075e-01	3.908e-01	2.107	8.213e-01	2.89	1.914				
[303,387)	25	20	80.00	3.200	1.490	6.873	2.858e-03	0.68	5.258e-01	2.045			
≥ 387	26	21	80.77	2.576	1.215	5.459	1.357e-02	1.19	5.940e-01	2.371			
Tertiles													
< 258	34	14	41.18	----	----	----	----	2.89	2.199		1.65e-03	2.00e-03	1.48e-01
[258,367)	33	20	60.61	2.123	1.053	4.279	3.525e-02	1.91	8.543e-01				
≥ 367	34	29	85.29	3.162	1.622	6.163	7.223e-04	0.79	5.940e-01	1.933			
Profile Likelihood													
<300.0	50	22	44.00	----	----	----	----	4.09	1.914		5.97e-05	6.09e-05	7.29e-03
≥300.0	51	41	80.39	2.978	1.702	5.212	1.325e-04	0.85	6.515e-01	1.927			
Quantitative	101	63	62.38	1.003	1.001	1.006	2.261e-03				2.672e-03	1.994e-03	

Cohort: Validation
Outcome: Transplant Free Survival
Predictor: IL8 (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 0.00767	20	10	50.00	----	----	----	----	4.09	1.185		2.50e-01	2.78e-01	5.42e-01
[0.00767,0.0101)	20	12	60.00	1.976	8.118e-01	4.811	1.334e-01	1.93	1.322				
[0.0101,0.0131)	19	11	57.89	2.283	9.841e-01	5.297	5.452e-02	0.68	5.532e-01				
[0.0131,0.0178)	20	15	75.00	2.275	9.576e-01	5.405	6.263e-02	0.85	7.995e-01				
≥ 0.0178	20	14	70.00	1.540	6.334e-01	3.747	3.407e-01	1.14	9.363e-01				
Quartiles													
< 0.00825	25	13	52.00	----	----	----	----	4.05	1.185		1.78e-01	2.08e-01	4.23e-01
[0.00825,0.0112)	24	15	62.50	1.840	8.673e-01	3.905	1.120e-01	1.93	6.845e-01				
[0.0112,0.0164)	25	16	64.00	2.152	1.011	4.577	4.667e-02	0.84	4.764e-01				
≥ 0.0164	25	18	72.00	1.933	8.770e-01	4.259	1.022e-01	1.51	9.884e-01	2.404			
Tertiles													
< 0.00959	33	16	48.48	----	----	----	----	4.05	1.185		4.50e-02	5.45e-02	1.39e-01
[0.00959,0.015)	33	22	66.67	2.074	1.079	3.988	2.874e-02	1.18	6.845e-01				
≥ 0.015	33	24	72.73	2.000	1.029	3.886	4.099e-02	1.14	8.543e-01	2.404			
Profile Likelihood													
< 0.0094	31	14	45.16	----	----	----	----	4.05	1.322		3.22e-03	4.75e-03	1.16e-02
≥ 0.0094	68	48	70.59	2.388	1.282	4.448	6.081e-03	1.14	7.995e-01	1.930			
Quantitative*	99	62	62.63	1.021	9.974e-01	1.046	8.170e-02				1.282e-01	8.466e-02	

*Units of pg / mL were used in **Quantitative model only**.

Cohort: Validation
Outcome: Transplant Free Survival
Predictor: VCAM (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 222	20	13	65.00	----	----	----	----	1.01	7.695e-01		1.61e-01	1.57e-01	1.14e-01
[222,260)	20	14	70.00	1.219	5.669e-01	2.620	6.124e-01	0.85	6.845e-01				
[260,310)	20	9	45.00	5.995e-01	2.538e-01	1.416	2.432e-01	2.37	1.322				
[310,376)	20	12	60.00	6.943e-01	3.158e-01	1.527	3.641e-01	2.05	1.511				
≥ 376	21	15	71.43	1.468	6.868e-01	3.136	3.221e-01	1.56	5.940e-01				
Quartiles													
< 230	25	17	68.00	----	----	----	----	1.01	6.515e-01		6.24e-01	6.22e-01	6.42e-01
[230,285)	25	14	56.00	7.316e-01	3.582e-01	1.494	3.909e-01	1.32	9.363e-01				
[285,358)	25	14	56.00	7.509e-01	3.680e-01	1.532	4.313e-01	2.05	1.511				
≥ 358	26	18	69.23	1.071	5.509e-01	2.082	8.398e-01	1.56	5.940e-01	3.565			
Tertiles													
< 246	34	24	70.59	----	----	----	----	0.80	6.845e-01		4.48e-02	5.27e-02	2.33e-02
[246,334)	33	15	45.45	4.620e-01	2.407e-01	8.871e-01	2.034e-02	2.37	1.552				
≥ 334	34	24	70.59	8.547e-01	4.839e-01	1.510	5.887e-01	1.56	6.790e-01	3.565			
Profile Likelihood													
<358.2	77	46	59.74	----	----	----	----	1.93	1.128	3.975	3.57e-02	2.51e-02	1.60e-02
≥358.2	24	17	70.83	1.905	1.073	3.382	2.786e-02	1.14	5.202e-01				
Quantitative	101	63	62.38	1.001	0.9985	1.003	5.206e-01				5.287e-01	5.208e-01	

Cohort: Validation
Outcome: Transplant Free Survival
Predictor: S100A12 (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 36.6	20	10	50.00	----	----	----	----	1.93	1.322		1.76e-01	1.28e-01	2.01e-01
[36.6,49.2)	20	9	45.00	1.187	5.269e-01	2.675	6.787e-01	2.40	2.045				
[49.2,65.9)	20	11	55.00	8.325e-01	3.364e-01	2.060	6.918e-01	2.20	8.350e-01				
[65.9,105)	20	17	85.00	1.076	4.544e-01	2.546	8.682e-01	0.80	4.519e-01	1.914			
≥ 105	21	16	76.19	2.112	9.624e-01	4.634	6.227e-02	1.19	4.710e-01				
Quartiles													
< 39.7	25	13	52.00	----	----	----	----	1.93	1.322		6.82e-01	6.84e-01	8.10e-01
[39.7,54.5)	25	13	52.00	1.055	4.871e-01	2.287	8.911e-01	2.34	9.363e-01				
[54.5,82.8)	25	17	68.00	1.455	7.033e-01	3.010	3.120e-01	1.13	5.285e-01				
≥ 82.8	26	20	76.92	1.358	6.661e-01	2.770	3.997e-01	1.01	5.940e-01	4.087			
Tertiles													
< 43.9	34	16	47.06	----	----	----	----	2.05	1.563		9.76e-02	8.95e-02	2.57e-02
[43.9,72.3)	33	19	57.58	1.228	6.296e-01	2.395	5.468e-01	2.20	9.363e-01				
≥ 72.3	34	28	82.35	1.920	1.029	3.582	4.035e-02	0.80	4.519e-01	1.552			
Profile Likelihood													
< 72.1	67	35	52.24	----	----	----	----	2.20	1.914	3.565	3.84e-02	3.33e-02	1.33e-02
≥ 72.1	34	28	82.35	1.727	1.039	2.871	3.511e-02	0.80	4.519e-01	1.552			
Quantitative	101	63	62.38	1.002	0.9973	1.006	4.431e-01				4.550e-01	4.427e-01	

Cohort: Validation

Outcome: Progression Free Survival by FVC (Lung Transplant is Censored)

Predictor: Age (years)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 61.6	19	11	57.89	----	----	----	----	1.22	7.661e-01		6.76e-02	4.07e-02	2.77e-02
[61.6,66.5)	20	13	65.00	2.858	1.240	6.589	1.374e-02	0.60	4.950e-01				
[66.5,70.1)	20	11	55.00	9.496e-01	4.113e-01	2.192	9.036e-01	2.04	8.620e-01				
[70.1,77.1)	20	13	65.00	1.222	5.405e-01	2.765	6.295e-01	1.13	7.990e-01				
≥ 77.1	20	15	75.00	1.744	7.903e-01	3.847	1.685e-01	0.85	7.251e-01				
Quartiles													
< 62.8	24	14	58.33	----	----	----	----	1.05	7.660e-01		3.88e-01	3.54e-01	3.87e-01
[62.8,68.4)	25	16	64.00	1.688	8.091e-01	3.523	1.628e-01	0.86	6.046e-01				
[68.4,75)	25	15	60.00	9.202e-01	4.435e-01	1.909	8.232e-01	1.13	9.879e-01				
≥ 75	25	18	72.00	1.165	5.750e-01	2.360	6.718e-01	1.51	7.934e-01				
Tertiles													
< 65.3	33	21	63.64	----	----	----	----	0.77	6.046e-01	2.198	9.19e-01	9.19e-01	5.94e-01
[65.3,72.8)	33	20	60.61	8.841e-01	4.783e-01	1.634	6.944e-01	1.01	8.620e-01				
≥ 72.8	33	22	66.67	9.105e-01	4.981e-01	1.664	7.607e-01	1.51	7.990e-01				
Profile Likelihood													
<67.8	46	29	63.04	----	----	----	----	0.86	7.634e-01	1.218	2.07e-01	2.03e-01	1.93e-02
≥67.8	53	34	64.15	7.238e-01	4.392e-01	1.193	2.047e-01	1.32	9.879e-01	2.045			
Quantitative													
	99	63	63.64	1.002	9.731e-01	1.031	9.069e-01				9.067e-01	9.069e-01	

Predictor: Gender

Female	34	20	58.82	----	----	----	----	1.22	0.988	3.56			
Male	65	43	66.15	1.76	1.021	3.016	4.19E-02	0.86	0.766	1.51	3.64E-02	3.95E-02	

Cohort: Validation
Outcome: Progression Free Survival by FVC (Lung Transplant is Censored)
Predictor: Baseline (4-month) FVC % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 48.7	18	15	83.33	----	----	----	----	1.01	5.935e-01	2.888	3.98e-03	9.54e-03	8.99e-02
[48.7,54.9)	16	12	75.00	1.435	6.606e-01	3.116	3.617e-01	1.13	4.759e-01				
[54.9,62)	17	13	76.47	1.537	7.042e-01	3.355	2.804e-01	0.82	5.471e-01				
[62,77.2)	17	11	64.71	1.064	4.784e-01	2.369	8.783e-01	0.86	7.251e-01				
≥ 77.2	18	6	33.33	3.057e-01	1.178e-01	7.937e-01	1.490e-02	5.13	2.198				
Quartiles													
< 49.7	21	18	85.71	----	----	----	----	1.01	5.935e-01	2.702	6.53e-03	1.10e-02	4.62e-02
[49.7,58.2)	22	14	63.64	1.289	6.304e-01	2.635	4.868e-01	0.85	4.977e-01				
[58.2,72.6)	22	16	72.73	1.387	6.916e-01	2.784	3.566e-01	0.82	7.032e-01	1.130			
≥ 72.6	21	9	42.86	3.924e-01	1.754e-01	8.777e-01	2.275e-02	2.20	1.511				
Tertiles													
< 51.8	28	23	82.14	----	----	----	----	1.01	5.935e-01	2.094	2.58e-03	3.72e-03	1.24e-01
[51.8,67.6)	30	21	70.00	1.279	6.915e-01	2.367	4.326e-01	0.82	7.032e-01	1.130			
≥ 67.6	28	13	46.43	3.982e-01	1.974e-01	8.032e-01	1.012e-02	1.91	9.879e-01				
Profile Likelihood													
< 76.1	68	51	75.00	----	----	----	----	0.85	7.634e-01	1.127	2.09e-04	7.38e-04	2.13e-02
≥ 76.1	18	6	33.33	2.560e-01	1.093e-01	5.999e-01	1.713e-03	5.13	2.198				
Quantitative													
	86	57	66.28	9.801e-01	9.666e-01	9.938e-01	4.634e-03				3.615e-03	4.106e-03	

Cohort: Validation

Outcome: Progression Free Survival by FVC (Lung Transplant is Censored)

Predictor: Baseline (4-month) DLco % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 30.1	17	10	58.82	----	----	----	----	0.99	4.349e-01		1.97e-01	1.75e-01	7.91e-01
[30.1,38.8)	15	13	86.67	7.234e-01	3.109e-01	1.683	4.523e-01	0.83	7.032e-01				
[38.8,46)	16	11	68.75	6.228e-01	2.570e-01	1.510	2.945e-01	0.99	4.977e-01				
[46,62.2)	16	10	62.50	3.973e-01	1.618e-01	9.754e-01	4.398e-02	1.26	8.538e-01				
≥ 62.2	17	9	52.94	4.004e-01	1.605e-01	9.989e-01	4.972e-02	1.51	8.620e-01				
Quartiles													
< 31.7	21	13	61.90	----	----	----	----	1.05	5.935e-01		9.35e-02	9.54e-02	1.34e-02
[31.7,43.7)	19	16	84.21	1.064	5.020e-01	2.255	8.715e-01	0.77	4.950e-01	2.370			
[43.7,56.5)	20	11	55.00	4.439e-01	1.942e-01	1.015	5.415e-02	1.56	7.660e-01				
≥ 56.5	21	13	61.90	6.443e-01	2.957e-01	1.404	2.687e-01	0.98	8.236e-01				
Tertiles													
< 34.6	27	18	66.67	----	----	----	----	0.99	5.935e-01		1.41e-01	1.47e-01	9.42e-01
[34.6,47.8)	27	21	77.78	8.130e-01	4.268e-01	1.549	5.290e-01	0.82	6.046e-01	2.370			
≥ 47.8	27	14	51.85	5.056e-01	2.505e-01	1.020	5.697e-02	1.51	9.386e-01				
Profile Likelihood													
< 47.0	51	37	72.55	----	----	----	----	0.83	7.251e-01	1.180	1.31e-02	1.47e-02	3.44e-01
≥ 47.0	30	16	53.33	4.879e-01	2.708e-01	8.789e-01	1.685e-02	1.51	9.386e-01				
Quantitative													
	81	53	65.43	9.817e-01	9.663e-01	9.974e-01	2.226e-02				1.526e-02	2.134e-02	

Cohort: Validation

Outcome: Progression Free Survival by FVC (Lung Transplant is Censored)

Predictor: Baseline (4-month) CPI

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 41.2	17	9	52.94	----	----	----	----	1.51	8.236e-01		2.31e-01	2.07e-01	2.02e-01
[41.2,50.9)	15	9	60.00	1.054	4.162e-01	2.670	9.114e-01	1.55	9.386e-01				
[50.9,59.1)	17	11	64.71	1.820	7.512e-01	4.409	1.848e-01	0.77	4.950e-01				
[59.1,65.3)	16	13	81.25	1.530	6.425e-01	3.643	3.368e-01	1.56	4.977e-01				
≥ 65.3	16	11	68.75	2.493	1.017	6.110	4.574e-02	1.01	4.349e-01				
Quartiles													
< 44.4	21	11	52.38	----	----	----	----	1.13	8.236e-01		9.49e-02	9.02e-02	3.36e-01
[44.4,55.5)	19	11	57.89	1.006	4.348e-01	2.325	9.896e-01	1.26	8.538e-01				
[55.5,64.1)	21	16	76.19	1.993	9.133e-01	4.347	8.323e-02	0.73	4.950e-01				
≥ 64.1	20	15	75.00	2.081	9.478e-01	4.567	6.781e-02	1.01	4.349e-01				
Tertiles													
< 49.9	27	15	55.56	----	----	----	----	1.26	9.386e-01		1.75e-01	1.65e-01	2.97e-01
[49.9,60.6)	27	18	66.67	1.323	6.629e-01	2.642	4.269e-01	0.82	7.251e-01	2.888			
≥ 60.6	27	20	74.07	1.891	9.632e-01	3.711	6.417e-02	1.01	4.977e-01	2.094			
Profile Likelihood													
<53.0	36	19	52.78	----	----	----	----	1.51	9.386e-01		2.52e-03	2.53e-03	1.96e-01
≥53.0	45	34	75.56	2.365	1.331	4.203	3.350e-03	0.77	5.935e-01	1.180			
Quantitative	81	53	65.43	1.029	1.007	1.052	8.322e-03				5.057e-03	7.622e-03	

Cohort: Validation
Outcome: Progression Free Survival by FVC (Lung Transplant is Censored)
Predictor: Baseline (3-month) FVC % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 48.9	15	12	80.00	----	----	----	----	0.99	5.935e-01		5.58e-03	1.21e-02	1.35e-01
[48.9,55.7)	14	9	64.29	1.140	4.723e-01	2.754	7.701e-01	1.13	4.759e-01				
[55.7,62)	13	11	84.62	1.552	6.642e-01	3.626	3.101e-01	0.82	4.977e-01				
[62,76.7)	16	10	62.50	8.864e-01	3.759e-01	2.091	7.830e-01	0.86	7.251e-01				
≥ 76.7	15	5	33.33	2.512e-01	8.770e-02	7.193e-01	1.006e-02	5.13	2.198				
Quartiles													
< 49.7	18	15	83.33	----	----	----	----	1.01	5.935e-01		1.20e-02	2.01e-02	1.24e-01
[49.7,58.8)	18	11	61.11	1.230	5.519e-01	2.739	6.131e-01	0.85	4.977e-01				
[58.8,73.3)	19	13	68.42	1.182	5.512e-01	2.533	6.680e-01	0.82	7.032e-01				
≥ 73.3	18	8	44.44	3.483e-01	1.468e-01	8.265e-01	1.674e-02	2.20	1.511				
Tertiles													
< 51.8	24	19	79.17	----	----	----	----	1.01	5.935e-01	2.094	1.57e-03	2.29e-03	8.93e-02
[51.8,68.1)	25	17	68.00	1.339	6.754e-01	2.657	4.028e-01	0.82	7.032e-01	1.130			
≥ 68.1	24	11	45.83	3.446e-01	1.590e-01	7.467e-01	6.929e-03	2.20	1.264				
Profile Likelihood													
< 76.1	58	42	72.41	----	----	----	----	0.86	7.660e-01	1.127	3.21e-04	1.04e-03	3.81e-02
≥ 76.1	15	5	33.33	2.340e-01	9.145e-02	5.986e-01	2.441e-03	5.13	2.198				
Quantitative													
	73	47	64.38	9.785e-01	9.644e-01	9.928e-01	3.375e-03				2.848e-03	2.834e-03	

Cohort: Validation

Outcome: Progression Free Survival by FVC (Lung Transplant is Censored)

Predictor: Baseline (3-month) DLco % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 28.6	14	8	57.14	----	----	----	----	1.13	4.349e-01		1.95e-01	1.67e-01	7.52e-01
[28.6,38.3)	13	10	76.92	9.968e-01	3.888e-01	2.556	9.946e-01	0.82	4.595e-01				
[38.3,46)	13	9	69.23	5.880e-01	2.176e-01	1.589	2.950e-01	0.99	7.251e-01				
[46,61.3)	14	9	64.29	4.147e-01	1.547e-01	1.112	8.019e-02	1.26	8.538e-01				
≥ 61.3	14	8	57.14	4.247e-01	1.562e-01	1.155	9.330e-02	1.51	8.620e-01				
Quartiles													
< 30.9	18	10	55.56	----	----	----	----	1.05	5.935e-01		6.30e-01	6.25e-01	1.95e-01
[30.9,43.8)	16	12	75.00	8.967e-01	3.775e-01	2.130	8.049e-01	0.99	4.977e-01				
[43.8,55.1)	16	11	68.75	6.684e-01	2.766e-01	1.616	3.710e-01	1.26	7.251e-01				
≥ 55.1	18	11	61.11	6.109e-01	2.572e-01	1.451	2.642e-01	1.13	8.620e-01				
Tertiles													
< 33.8	22	13	59.09	----	----	----	----	1.05	5.935e-01		2.14e-01	2.28e-01	8.23e-01
[33.8,47.4)	24	19	79.17	8.978e-01	4.297e-01	1.876	7.744e-01	0.79	6.046e-01	2.198			
≥ 47.4	22	12	54.55	5.312e-01	2.406e-01	1.173	1.174e-01	1.39	9.386e-01				
Profile Likelihood													
< 39.5	28	19	67.86	----	----	----	----	0.82	4.977e-01	1.218	9.78e-03	6.81e-03	1.37e-01
≥ 39.5	40	25	62.50	4.283e-01	2.278e-01	8.053e-01	8.483e-03	1.26	9.386e-01	2.702			
Quantitative	68	44	64.71	9.826e-01	9.663e-01	9.992e-01	4.053e-02				3.040e-02	3.928e-02	

Cohort: Validation
Outcome: Progression Free Survival by FVC (Lung Transplant is Censored)
Predictor: Baseline (3-month) CPI

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 42.9	14	8	57.14	----	----	----	----	1.13	8.236e-01		2.04e-01	1.68e-01	9.83e-02
[42.9,51.7)	13	8	61.54	9.146e-01	3.395e-01	2.464	8.598e-01	1.55	9.770e-01				
[51.7,59.8)	14	8	57.14	1.099	4.096e-01	2.947	8.518e-01	0.77	7.032e-01				
[59.8,66)	14	12	85.71	2.257	9.100e-01	5.597	7.900e-02	0.71	4.595e-01				
≥ 66	13	8	61.54	1.940	7.129e-01	5.279	1.945e-01	1.05	4.349e-01				
Quartiles													
< 45.4	18	11	61.11	----	----	----	----	1.26	8.620e-01		1.19e-01	9.08e-02	6.27e-01
[45.4,56)	16	9	56.25	1.038	4.281e-01	2.515	9.346e-01	0.99	8.538e-01				
[56,64.8)	17	12	70.59	1.575	6.880e-01	3.605	2.824e-01	0.82	7.032e-01				
≥ 64.8	17	12	70.59	2.602	1.117	6.063	2.671e-02	0.99	4.349e-01				
Tertiles													
< 50.3	22	14	63.64	----	----	----	----	1.39	9.386e-01		3.72e-02	2.31e-02	2.68e-01
[50.3,62.2)	24	14	58.33	1.045	4.927e-01	2.218	9.080e-01	0.85	7.251e-01				
≥ 62.2	22	16	72.73	2.452	1.175	5.118	1.687e-02	0.99	4.349e-01	1.218			
Profile Likelihood													
<53.0	29	16	55.17	----	----	----	----	1.51	9.770e-01		3.08e-03	3.00e-03	1.33e-01
≥53.0	39	28	71.79	2.535	1.344	4.780	4.053e-03	0.82	5.935e-01	1.180			
Quantitative	68	44	64.71	1.029	1.006	1.053	1.523e-02				9.810e-03	1.407e-02	

Cohort: Validation

Outcome: Progression Free Survival by FVC (Lung Transplant is Censored)

Predictor: MMP7Elisa (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 3.41	19	13	68.42	----	----	----	----	0.86	7.990e-01		5.32e-01	4.98e-01	4.79e-01
[3.41,4.56)	19	12	63.16	7.000e-01	3.157e-01	1.552	3.799e-01	1.51	7.661e-01				
[4.56,5.49)	20	13	65.00	6.983e-01	3.195e-01	1.526	3.680e-01	1.70	4.595e-01				
[5.49,7.52)	20	13	65.00	1.215	5.570e-01	2.652	6.242e-01	0.79	5.800e-01				
≥ 7.52	21	12	57.14	6.925e-01	3.121e-01	1.537	3.661e-01	1.32	1.180				
Quartiles													
< 3.54	24	16	66.67	----	----	----	----	0.98	8.538e-01		8.60e-01	8.53e-01	2.99e-01
[3.54,4.94)	24	14	58.33	9.645e-01	4.688e-01	1.984	9.218e-01	1.70	7.251e-01				
[4.94,6.46)	25	18	72.00	1.271	6.453e-01	2.503	4.880e-01	0.77	4.759e-01	2.198			
≥ 6.46	26	15	57.69	1.015	5.000e-01	2.062	9.663e-01	1.22	8.346e-01				
Tertiles													
< 3.99	33	21	63.64	----	----	----	----	0.99	8.538e-01		8.72e-01	8.71e-01	2.69e-01
[3.99,5.91)	32	23	71.88	1.172	6.461e-01	2.127	6.012e-01	0.99	4.950e-01	2.094			
≥ 5.91	34	19	55.88	1.077	5.775e-01	2.010	8.145e-01	1.18	8.235e-01				
Profile Likelihood													
< 4.7	43	26	60.47	----	----	----	----	1.13	8.620e-01	2.335	2.48e-01	2.48e-01	1.84e-02
≥ 4.7	56	37	66.07	1.344	8.116e-01	2.225	2.507e-01	1.01	7.660e-01	1.552			
Quantitative													
	99	63	63.64	9.635e-01	8.894e-01	1.044	3.631e-01				3.407e-01	3.622e-01	

Cohort: Validation
Outcome: Progression Free Survival by FVC (Lung Transplant is Censored)
Predictor: ICAM (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 226	20	10	50.00	----	----	----	----	0.99	8.235e-01		9.49e-02	9.29e-02	2.15e-01
[226,281)	20	11	55.00	9.323e-01	3.934e-01	2.210	8.735e-01	1.70	1.127				
[281,326)	18	13	72.22	1.941	8.286e-01	4.547	1.267e-01	0.85	4.595e-01				
[326,419)	20	14	70.00	2.340	1.025	5.342	4.349e-02	0.82	4.950e-01				
≥ 419	21	15	71.43	1.740	7.657e-01	3.954	1.860e-01	1.22	7.634e-01				
Quartiles													
< 238	25	13	52.00	----	----	----	----	1.01	8.346e-01		3.53e-02	2.82e-02	9.04e-02
[238,303)	24	13	54.17	9.703e-01	4.482e-01	2.101	9.391e-01	1.70	9.770e-01				
[303,387)	24	19	79.17	2.366	1.158	4.833	1.818e-02	0.73	4.950e-01	1.322			
≥ 387	26	18	69.23	1.745	8.440e-01	3.610	1.330e-01	1.22	7.032e-01	2.335			
Tertiles													
< 258	34	17	50.00	----	----	----	----	1.18	9.879e-01		6.69e-03	7.91e-03	2.94e-02
[258,367)	31	23	74.19	2.718	1.401	5.273	3.101e-03	0.82	5.471e-01	1.697			
≥ 367	34	23	67.65	2.092	1.097	3.988	2.500e-02	1.22	7.634e-01	2.094			
Profile Likelihood													
<262.0	35	17	48.57	----	----	----	----	1.18	1.007		1.47e-03	1.98e-03	4.67e-03
≥262.0	64	46	71.88	2.432	1.361	4.347	2.697e-03	0.85	7.251e-01	1.511			
Quantitative	99	63	63.64	1.002	0.9997	1.004	8.066e-02				8.504e-02	7.940e-02	

Cohort: **Validation**

Outcome: **Progression Free Survival by FVC (Lung Transplant is Censored)**

Predictor: **IL8 (ng / mL)**

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 0.00767	19	11	57.89	----	----	----	----	0.99	7.660e-01		8.85e-01	8.91e-01	9.39e-01
[0.00767,0.0101)	20	14	70.00	1.561	6.353e-01	3.838	3.314e-01	1.05	7.934e-01				
[0.0101,0.0131)	18	10	55.56	1.305	5.685e-01	2.998	5.297e-01	1.18	4.513e-01				
[0.0131,0.0178)	20	13	65.00	1.432	6.324e-01	3.245	3.890e-01	1.13	8.346e-01				
≥ 0.0178	20	14	70.00	1.352	5.886e-01	3.107	4.771e-01	0.99	5.935e-01				
Quartiles													
< 0.00825	24	15	62.50	----	----	----	----	0.99	7.660e-01		9.29e-01	9.29e-01	9.27e-01
[0.00825,0.0112)	24	15	62.50	1.287	6.077e-01	2.726	5.097e-01	1.01	7.251e-01				
[0.0112,0.0164)	24	14	58.33	1.169	5.802e-01	2.354	6.626e-01	0.98	7.990e-01				
≥ 0.0164	25	18	72.00	1.159	5.517e-01	2.433	6.974e-01	1.13	7.661e-01	2.888			
Tertiles													
< 0.00959	32	19	59.38	----	----	----	----	1.01	8.235e-01		6.43e-01	6.48e-01	7.54e-01
[0.00959,0.015)	32	20	62.50	1.252	6.747e-01	2.322	4.764e-01	0.83	7.251e-01				
≥ 0.015	33	23	69.70	1.337	7.015e-01	2.547	3.777e-01	1.13	7.990e-01	1.913			
Profile Likelihood													
< 0.0092	28	16	57.14	----	----	----	----	1.01	8.620e-01		1.83e-01	1.92e-01	2.93e-01
≥ 0.0092	69	46	66.67	1.472	8.191e-01	2.645	1.961e-01	0.99	7.990e-01	1.552			
Quantitative*													
	97	62	63.92	1.013	9.841e-01	1.043	3.786e-01				4.107e-01	3.824e-01	

*Units of pg / mL were used in **Quantitative model only**.

Cohort: Validation
Outcome: Progression Free Survival by FVC (Lung Transplant is Censored)
Predictor: VCAM (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 222	20	13	65.00	----	----	----	----	1.05	8.235e-01		7.24e-01	7.08e-01	5.12e-01
[222,260)	20	15	75.00	1.327	6.273e-01	2.809	4.589e-01	0.80	5.471e-01	2.702			
[260,310)	19	10	52.63	7.870e-01	3.430e-01	1.806	5.718e-01	1.32	9.386e-01				
[310,376)	20	13	65.00	8.454e-01	3.900e-01	1.833	6.706e-01	1.26	7.251e-01				
≥ 376	20	12	60.00	1.023	4.628e-01	2.262	9.548e-01	1.56	5.935e-01				
Quartiles													
< 230	25	17	68.00	----	----	----	----	1.05	8.235e-01		8.94e-01	8.92e-01	9.61e-01
[230,285)	24	16	66.67	1.138	5.699e-01	2.273	7.137e-01	0.86	7.934e-01				
[285,358)	25	16	64.00	9.275e-01	4.657e-01	1.847	8.305e-01	1.26	9.386e-01				
≥ 358	25	14	56.00	8.655e-01	4.257e-01	1.759	6.898e-01	1.22	5.935e-01				
Tertiles													
< 246	34	24	70.59	----	----	----	----	0.83	7.934e-01	2.198	4.98e-01	4.90e-01	5.94e-01
[246,334)	32	18	56.25	6.954e-01	3.759e-01	1.286	2.470e-01	0.99	9.386e-01				
≥ 334	33	21	63.64	7.981e-01	4.427e-01	1.439	4.533e-01	1.22	7.634e-01	2.335			
Profile Likelihood													
<246.8	34	24	70.59	----	----	----	----	0.83	7.934e-01	2.198	2.71e-01	2.62e-01	3.55e-01
≥246.8	65	39	60.00	7.473e-01	4.478e-01	1.247	2.649e-01	1.22	9.386e-01	1.913			
Quantitative													
	99	63	63.64	0.9993	0.9968	1.002	5.467e-01				5.385e-01	5.469e-01	

Cohort: Validation
Outcome: Progression Free Survival by FVC (Lung Transplant is Censored)
Predictor: S100A12 (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald Pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 36.6	20	14	70.00	----	----	----	----	0.85	7.251e-01		5.76e-02	4.34e-02	1.26e-03
[36.6,49.2)	19	10	52.63	4.946e-01	2.165e-01	1.130	9.494e-02	2.04	1.130				
[49.2,65.9)	19	11	57.89	4.479e-01	1.962e-01	1.022	5.645e-02	1.13	8.346e-01				
[65.9,105)	20	16	80.00	5.197e-01	2.323e-01	1.163	1.112e-01	0.82	7.661e-01	1.913			
≥ 105	21	12	57.14	1.152	5.591e-01	2.375	7.007e-01	0.99	5.935e-01				
Quartiles													
< 39.7	25	17	68.00	----	----	----	----	0.99	7.634e-01		3.08e-01	3.24e-01	1.23e-01
[39.7,54.5)	24	13	54.17	5.278e-01	2.527e-01	1.102	8.897e-02	2.20	1.130				
[54.5,82.8)	24	16	66.67	9.322e-01	4.666e-01	1.862	8.423e-01	1.05	7.661e-01	2.888			
≥ 82.8	26	17	65.38	7.543e-01	3.724e-01	1.528	4.339e-01	0.79	7.032e-01				
Tertiles													
< 43.9	34	22	64.71	----	----	----	----	1.13	8.538e-01	2.045	5.36e-01	5.44e-01	6.51e-01
[43.9,72.3)	31	18	58.06	7.823e-01	4.183e-01	1.463	4.422e-01	1.26	9.770e-01				
≥ 72.3	34	23	67.65	1.105	6.079e-01	2.008	7.440e-01	0.79	5.935e-01	1.552			
Profile Likelihood													
< 37.0	21	15	71.43	----	----	----	----	0.85	7.251e-01	1.697	8.28e-02	6.69e-02	2.59e-02
≥ 37.0	78	48	61.54	5.740e-01	3.148e-01	1.047	7.011e-02	1.13	9.386e-01	2.045			
Quantitative	99	63	63.64	1.002	0.9967	1.007	4.617e-01				4.725e-01	4.614e-01	

Cohort: Validation

Outcome: Progression Free Survival by DLCO (Lung Transplant is Censored)

Predictor: Age (years)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 61.6	19	9	47.37	----	----	----	----	2.09	9.495e-01		6.29e-02	8.91e-02	2.78e-01
[61.6,66.5)	20	12	60.00	3.050	1.254	7.421	1.395e-02	0.77	5.471e-01				
[66.5,70.1)	20	16	80.00	2.265	9.862e-01	5.200	5.395e-02	0.98	6.265e-01				
[70.1,77.1)	20	16	80.00	2.148	9.383e-01	4.916	7.039e-02	1.12	7.990e-01				
≥ 77.1	20	18	90.00	2.888	1.260	6.615	1.217e-02	0.90	7.934e-01	1.552			
Quartiles													
< 62.8	24	11	45.83	----	----	----	----	2.09	7.661e-01		3.96e-02	4.86e-02	1.17e-01
[62.8,68.4)	25	18	72.00	2.903	1.347	6.253	6.494e-03	0.77	5.471e-01	1.470			
[68.4,75)	25	20	80.00	1.995	9.434e-01	4.217	7.069e-02	0.99	7.990e-01	1.322			
≥ 75	25	22	88.00	2.098	1.005	4.379	4.840e-02	1.02	8.235e-01	1.514			
Tertiles													
< 65.3	33	18	54.55	----	----	----	----	1.18	7.661e-01		1.67e-01	1.81e-01	5.76e-01
[65.3,72.8)	33	25	75.76	1.680	9.069e-01	3.113	9.908e-02	0.98	6.265e-01	1.130			
≥ 72.8	33	28	84.85	1.635	8.982e-01	2.976	1.077e-01	0.94	7.990e-01	1.511			
Profile Likelihood													
<62.8	24	11	45.83	----	----	----	----	2.09	7.661e-01		8.62e-03	1.32e-02	8.64e-02
≥62.8	75	60	80.00	2.238	1.165	4.299	1.564e-02	0.94	8.127e-01	1.130			
Quantitative													
	99	71	71.72	1.028	9.997e-01	1.057	5.282e-02				4.643e-02	5.246e-02	
Predictor: Gender													
Female	34	22	64.71	----	----	----	----	1.13	0.977	2.37			
Male	65	49	75.38	1.64	0.983	2.728	5.81E-02	0.85	0.766	1.19	5.20E-02	5.53E-02	

Cohort: Validation
Outcome: Progression Free Survival by DLCO (Lung Transplant is Censored)
Predictor: Baseline (4-month) FVC % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 48.7	18	14	77.78	----	----	----	----	0.95	6.265e-01		5.66e-02	4.98e-02	1.85e-01
[48.7,54.9)	16	12	75.00	9.388e-01	4.338e-01	2.032	8.725e-01	0.90	6.647e-01				
[54.9,62)	17	16	94.12	1.738	8.300e-01	3.639	1.427e-01	0.77	4.787e-01	1.117			
[62,77.2)	17	12	70.59	8.987e-01	4.105e-01	1.967	7.893e-01	1.13	7.661e-01				
≥ 77.2	18	10	55.56	4.986e-01	2.144e-01	1.160	1.060e-01	1.51	8.346e-01				
Quartiles													
< 49.7	21	17	80.95	----	----	----	----	0.99	6.265e-01	2.094	8.52e-02	1.02e-01	3.07e-01
[49.7,58.2)	22	18	81.82	1.309	6.722e-01	2.550	4.283e-01	0.82	5.471e-01	1.127			
[58.2,72.6)	22	16	72.73	1.111	5.554e-01	2.223	7.657e-01	0.82	7.251e-01				
≥ 72.6	21	13	61.90	5.395e-01	2.566e-01	1.134	1.036e-01	1.51	9.768e-01				
Tertiles													
< 51.8	28	21	75.00	----	----	----	----	1.01	6.265e-01	1.609	7.08e-03	5.63e-03	2.90e-02
[51.8,67.6)	30	25	83.33	1.735	9.530e-01	3.157	7.149e-02	0.77	6.647e-01	9.358e-01			
≥ 67.6	28	18	64.29	6.293e-01	3.277e-01	1.208	1.642e-01	1.47	9.768e-01				
Profile Likelihood													
< 69.0	59	47	79.66	----	----	----	----	0.82	6.895e-01	1.007	4.87e-03	6.42e-03	1.16e-02
≥ 69.0	27	17	62.96	4.527e-01	2.523e-01	8.123e-01	7.883e-03	1.51	9.768e-01				
Quantitative													
	86	64	74.42	9.882e-01	9.749e-01	1.002	8.522e-02				8.266e-02	8.416e-02	

Cohort: Validation

Outcome: Progression Free Survival by DLCO (Lung Transplant is Censored)

Predictor: Baseline (4-month) DLco % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 30.1	17	11	64.71	----	----	----	----	0.59	3.363e-01		5.68e-01	5.22e-01	5.50e-01
[30.1,38.8)	15	12	80.00	6.262e-01	2.737e-01	1.433	2.677e-01	1.01	7.661e-01				
[38.8,46)	16	11	68.75	5.265e-01	2.260e-01	1.227	1.371e-01	1.40	7.660e-01				
[46,62.2)	16	12	75.00	5.181e-01	2.267e-01	1.184	1.189e-01	0.98	7.661e-01				
≥ 62.2	17	14	82.35	6.941e-01	3.086e-01	1.561	3.772e-01	0.90	5.800e-01				
Quartiles													
< 31.7	21	13	61.90	----	----	----	----	0.99	4.349e-01		5.12e-01	5.11e-01	2.26e-01
[31.7,43.7)	19	15	78.95	1.307	6.185e-01	2.761	4.834e-01	0.94	6.647e-01				
[43.7,56.5)	20	15	75.00	7.507e-01	3.558e-01	1.584	4.517e-01	1.40	7.661e-01				
≥ 56.5	21	17	80.95	1.048	4.985e-01	2.201	9.024e-01	0.90	5.800e-01				
Tertiles													
< 34.6	27	19	70.37	----	----	----	----	0.83	3.471e-01	1.415	5.65e-01	5.50e-01	7.37e-01
[34.6,47.8)	27	21	77.78	7.329e-01	3.927e-01	1.368	3.289e-01	0.98	8.235e-01	1.913			
≥ 47.8	27	20	74.07	7.414e-01	3.906e-01	1.407	3.600e-01	0.90	6.895e-01	1.552			
Profile Likelihood													
< 41.7	38	27	71.05	----	----	----	----	0.94	5.935e-01	1.180	1.32e-01	1.26e-01	1.58e-01
≥ 41.7	43	33	76.74	6.693e-01	3.984e-01	1.124	1.293e-01	1.08	8.236e-01	1.563			
Quantitative	81	60	74.07	9.947e-01	9.806e-01	1.009	4.680e-01				4.618e-01	4.678e-01	

Cohort: Validation
Outcome: Progression Free Survival by DLCO (Lung Transplant is Censored)
Predictor: Baseline (4-month) CPI

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 41.2	17	13	76.47	----	----	----	----	1.08	8.127e-01		9.24e-01	9.20e-01	6.22e-01
[41.2,50.9)	15	11	73.33	9.450e-01	4.136e-01	2.159	8.933e-01	0.98	8.236e-01				
[50.9,59.1)	17	12	70.59	1.055	4.730e-01	2.351	8.966e-01	0.83	7.251e-01				
[59.1,65.3)	16	13	81.25	1.212	5.486e-01	2.679	6.343e-01	0.95	5.935e-01				
≥ 65.3	16	11	68.75	1.342	5.872e-01	3.068	4.853e-01	0.99	3.363e-01				
Quartiles													
< 44.4	21	15	71.43	----	----	----	----	1.08	5.800e-01		6.51e-01	6.46e-01	9.60e-01
[44.4,55.5)	19	14	73.68	1.034	4.923e-01	2.173	9.289e-01	0.98	8.236e-01				
[55.5,64.1)	21	16	76.19	1.357	6.589e-01	2.794	4.077e-01	0.94	7.251e-01				
≥ 64.1	20	15	75.00	1.483	7.114e-01	3.091	2.931e-01	0.99	3.363e-01	1.415			
Tertiles													
< 49.9	27	19	70.37	----	----	----	----	1.13	8.236e-01	2.198	3.82e-01	3.74e-01	8.76e-01
[49.9,60.6)	27	21	77.78	1.227	6.521e-01	2.308	5.260e-01	0.83	7.660e-01	1.913			
≥ 60.6	27	20	74.07	1.573	8.291e-01	2.986	1.656e-01	0.95	4.349e-01	1.415			
Profile Likelihood													
<59.8	52	38	73.08	----	----	----	----	0.98	8.236e-01	1.552	1.09e-01	9.78e-02	3.35e-01
≥59.8	29	22	75.86	1.560	9.162e-01	2.657	1.015e-01	0.94	4.349e-01	1.180			
Quantitative	81	60	74.07	1.013	9.932e-01	1.033	2.012e-01				1.916e-01	2.003e-01	

Cohort: Validation
Outcome: Progression Free Survival by DLCO (Lung Transplant is Censored)
Predictor: Baseline (3-month) FVC % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 48.9	15	11	73.33	----	----	----	----	0.95	5.935e-01		1.68e-01	1.57e-01	4.22e-01
[48.9,55.7)	14	10	71.43	8.946e-01	3.790e-01	2.112	7.993e-01	1.12	4.787e-01				
[55.7,62)	13	12	92.31	1.522	6.605e-01	3.506	3.242e-01	0.82	3.993e-01				
[62,76.7)	16	11	68.75	7.773e-01	3.328e-01	1.816	5.606e-01	1.40	7.661e-01				
≥ 76.7	15	9	60.00	4.880e-01	1.950e-01	1.222	1.254e-01	1.51	8.127e-01				
Quartiles													
< 49.7	18	14	77.78	----	----	----	----	0.99	6.265e-01	2.094	8.71e-02	7.83e-02	2.52e-01
[49.7,58.8)	18	14	77.78	1.710	8.028e-01	3.642	1.643e-01	0.82	4.787e-01	1.127			
[58.8,73.3)	19	13	68.42	1.049	4.870e-01	2.260	9.024e-01	0.86	7.251e-01				
≥ 73.3	18	12	66.67	5.986e-01	2.706e-01	1.324	2.051e-01	1.51	9.768e-01				
Tertiles													
< 51.8	24	17	70.83	----	----	----	----	1.01	7.934e-01	2.094	6.73e-03	4.69e-03	2.04e-02
[51.8,68.1)	25	20	80.00	1.979	9.990e-01	3.920	5.032e-02	0.77	4.787e-01	1.117			
≥ 68.1	24	16	66.67	6.315e-01	3.107e-01	1.283	2.040e-01	1.51	9.768e-01				
Profile Likelihood													
< 68.3	49	37	75.51	----	----	----	----	0.85	7.251e-01	1.127	1.33e-02	1.56e-02	3.92e-02
≥ 68.3	24	16	66.67	4.729e-01	2.543e-01	8.796e-01	1.803e-02	1.51	9.768e-01				
Quantitative													
	73	53	72.60	9.882e-01	9.740e-01	1.003	1.097e-01				1.084e-01	1.085e-01	

Cohort: Validation

Outcome: Progression Free Survival by DLCO (Lung Transplant is Censored)

Predictor: Baseline (3-month) DLco % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 28.6	14	9	64.29	----	----	----	----	0.99	3.363e-01		6.64e-01	6.40e-01	6.57e-01
[28.6,38.3)	13	9	69.23	6.886e-01	2.708e-01	1.751	4.333e-01	1.01	3.637e-01				
[38.3,46)	13	9	69.23	4.973e-01	1.950e-01	1.269	1.437e-01	1.48	9.358e-01				
[46,61.3)	14	11	78.57	5.804e-01	2.386e-01	1.412	2.303e-01	0.98	7.661e-01				
≥ 61.3	14	12	85.71	7.214e-01	2.958e-01	1.760	4.729e-01	0.86	5.800e-01				
Quartiles													
< 30.9	18	10	55.56	----	----	----	----	1.12	4.349e-01		9.79e-01	9.79e-01	3.61e-01
[30.9,43.8)	16	12	75.00	1.068	4.587e-01	2.485	8.794e-01	0.95	8.235e-01				
[43.8,55.1)	16	13	81.25	9.254e-01	4.049e-01	2.115	8.541e-01	1.40	7.661e-01				
≥ 55.1	18	15	83.33	1.078	4.744e-01	2.450	8.577e-01	0.86	6.265e-01				
Tertiles													
< 33.8	22	14	63.64	----	----	----	----	1.01	3.471e-01		9.15e-01	9.14e-01	9.33e-01
[33.8,47.4)	24	19	79.17	8.829e-01	4.408e-01	1.768	7.251e-01	0.98	8.235e-01	1.913			
≥ 47.4	22	17	77.27	8.648e-01	4.189e-01	1.785	6.945e-01	1.08	6.895e-01	1.552			
Profile Likelihood													
< 30.1	16	10	62.50	----	----	----	----	0.99	3.363e-01		1.92e-01	1.68e-01	2.35e-01
≥ 30.1	52	40	76.92	6.119e-01	3.025e-01	1.238	1.717e-01	1.01	8.236e-01	1.514			
Quantitative													
	68	50	73.53	9.955e-01	9.802e-01	1.011	5.679e-01				5.634e-01	5.677e-01	

Cohort: Validation
Outcome: Progression Free Survival by DLCO (Lung Transplant is Censored)
Predictor: Baseline (3-month) CPI

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 42.9	14	12	85.71	----	----	----	----	0.86	5.800e-01		2.52e-01	2.09e-01	3.29e-02
[42.9,51.7)	13	9	69.23	6.882e-01	2.805e-01	1.688	4.143e-01	1.51	8.538e-01				
[51.7,59.8)	14	9	64.29	6.163e-01	2.536e-01	1.498	2.853e-01	1.40	7.660e-01				
[59.8,66)	14	12	85.71	1.588	6.901e-01	3.655	2.767e-01	0.82	3.637e-01				
≥ 66	13	8	61.54	9.232e-01	3.665e-01	2.326	8.655e-01	1.12	3.363e-01				
Quartiles													
< 45.4	18	14	77.78	----	----	----	----	1.13	8.127e-01		6.37e-01	6.21e-01	9.26e-01
[45.4,56)	16	12	75.00	1.162	5.289e-01	2.553	7.084e-01	0.98	7.661e-01				
[56,64.8)	17	12	70.59	1.299	5.888e-01	2.865	5.171e-01	0.95	7.251e-01				
≥ 64.8	17	12	70.59	1.683	7.626e-01	3.712	1.975e-01	0.99	3.363e-01				
Tertiles													
< 50.3	22	17	77.27	----	----	----	----	1.47	8.236e-01	2.198	4.78e-01	4.73e-01	8.83e-01
[50.3,62.2)	24	18	75.00	1.249	6.353e-01	2.455	5.195e-01	0.95	7.660e-01	1.609			
≥ 62.2	22	15	68.18	1.554	7.638e-01	3.162	2.238e-01	0.99	4.349e-01	2.094			
Profile Likelihood													
<59.8	41	30	73.17	----	----	----	----	1.13	8.236e-01	1.609	9.78e-02	8.87e-02	2.18e-01
≥59.8	27	20	74.07	1.642	9.223e-01	2.925	9.192e-02	0.94	4.349e-01	1.180			
Quantitative													
	68	50	73.53	1.012	9.907e-01	1.033	2.753e-01				2.656e-01	2.745e-01	

Cohort: Validation

Outcome: Progression Free Survival by DLCO (Lung Transplant is Censored)

Predictor: MMP7Elisa (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 3.41	19	14	73.68	----	----	----	----	0.81	6.265e-01		9.29e-01	9.27e-01	6.79e-01
[3.41,4.56)	19	14	73.68	7.400e-01	3.440e-01	1.592	4.409e-01	1.13	7.251e-01				
[4.56,5.49)	20	16	80.00	8.579e-01	4.095e-01	1.797	6.845e-01	0.99	9.030e-01	2.888			
[5.49,7.52)	20	14	70.00	8.529e-01	3.964e-01	1.835	6.839e-01	1.01	6.647e-01	2.094			
≥ 7.52	21	13	61.90	7.244e-01	3.325e-01	1.578	4.170e-01	1.32	8.346e-01				
Quartiles													
< 3.54	24	17	70.83	----	----	----	----	0.85	7.990e-01		5.55e-01	5.37e-01	7.98e-02
[3.54,4.94)	24	19	79.17	1.510	7.698e-01	2.961	2.306e-01	0.90	6.895e-01	1.913			
[4.94,6.46)	25	18	72.00	9.668e-01	4.909e-01	1.904	9.221e-01	1.08	7.660e-01				
≥ 6.46	26	17	65.38	1.139	5.732e-01	2.263	7.104e-01	1.18	8.235e-01	1.552			
Tertiles													
< 3.99	33	24	72.73	----	----	----	----	0.85	7.661e-01	1.563	6.42e-01	6.39e-01	4.59e-01
[3.99,5.91)	32	27	84.38	1.191	6.821e-01	2.081	5.382e-01	0.99	7.251e-01	1.609			
≥ 5.91	34	20	58.82	9.083e-01	4.974e-01	1.659	7.542e-01	1.19	8.235e-01	1.552			
Profile Likelihood													
< 6.1	67	52	77.61	----	----	----	----	0.94	7.661e-01	1.127	3.51e-01	3.60e-01	9.31e-01
≥ 6.1	32	19	59.38	7.808e-01	4.598e-01	1.326	3.597e-01	1.19	8.346e-01	2.370			
Quantitative													
	99	71	71.72	9.520e-01	8.807e-01	1.029	2.150e-01				1.878e-01	2.137e-01	

Cohort: Validation
Outcome: Progression Free Survival by DLCO (Lung Transplant is Censored)
Predictor: ICAM (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 226	20	12	60.00	----	----	----	----	1.01	8.235e-01		2.25e-01	1.60e-01	1.43e-01
[226,281)	20	17	85.00	1.284	6.007e-01	2.744	5.190e-01	1.02	8.236e-01	2.198			
[281,326)	18	12	66.67	1.204	5.245e-01	2.762	6.620e-01	0.77	4.513e-01				
[326,419)	20	15	75.00	2.396	1.084	5.297	3.090e-02	0.73	4.759e-01	1.511			
≥ 419	21	15	71.43	1.112	5.060e-01	2.443	7.918e-01	1.47	9.495e-01	2.335			
Quartiles													
< 238	25	16	64.00	----	----	----	----	0.98	8.235e-01		4.25e-01	3.85e-01	2.85e-01
[238,303)	24	18	75.00	1.081	5.439e-01	2.148	8.241e-01	1.02	8.236e-01				
[303,387)	24	18	75.00	1.723	8.620e-01	3.444	1.236e-01	0.66	4.513e-01	1.514			
≥ 387	26	19	73.08	1.160	5.854e-01	2.298	6.708e-01	1.19	7.934e-01	2.094			
Tertiles													
< 258	34	24	70.59	----	----	----	----	1.08	8.346e-01	2.198	3.71e-01	3.76e-01	3.69e-01
[258,367)	31	22	70.97	1.515	8.335e-01	2.753	1.731e-01	0.77	5.800e-01	1.322			
≥ 367	34	25	73.53	1.324	7.436e-01	2.357	3.403e-01	1.19	7.934e-01	1.563			
Profile Likelihood													
<291.7	45	31	68.89	----	----	----	----	1.02	8.620e-01	1.913	9.88e-02	9.90e-02	3.61e-02
≥291.7	54	40	74.07	1.495	9.241e-01	2.420	1.013e-01	0.85	6.265e-01	1.470			
Quantitative	99	71	71.72	1.001	0.9985	1.003	6.001e-01				6.017e-01	5.999e-01	

Cohort: **Validation**

Outcome: **Progression Free Survival by DLCO (Lung Transplant is Censored)**

Predictor: **IL8 (ng / mL)**

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 0.00767	19	12	63.16	----	----	----	----	1.40	7.660e-01		1.93e-01	2.02e-01	3.87e-01
[0.00767,0.0101)	20	13	65.00	1.959	8.321e-01	4.610	1.238e-01	1.01	7.934e-01				
[0.0101,0.0131)	18	12	66.67	2.242	9.914e-01	5.069	5.246e-02	1.02	4.759e-01				
[0.0131,0.0178)	20	15	75.00	1.948	8.838e-01	4.294	9.819e-02	0.83	7.990e-01	1.563			
≥ 0.0178	20	17	85.00	1.194	5.213e-01	2.734	6.752e-01	0.98	7.661e-01	1.552			
Quartiles													
< 0.00825	24	16	66.67	----	----	----	----	1.19	7.661e-01		2.30e-01	2.27e-01	4.50e-01
[0.00825,0.0112)	24	15	62.50	2.023	9.818e-01	4.169	5.609e-02	1.01	7.934e-01				
[0.0112,0.0164)	24	17	70.83	1.667	8.376e-01	3.316	1.457e-01	0.82	4.759e-01	1.609			
≥ 0.0164	25	21	84.00	1.290	6.164e-01	2.700	4.990e-01	0.99	9.030e-01	1.514			
Tertiles													
< 0.00959	32	19	59.38	----	----	----	----	1.19	8.235e-01		3.86e-02	4.23e-02	8.30e-02
[0.00959,0.015)	32	22	68.75	2.162	1.170	3.996	1.382e-02	1.02	5.800e-01				
≥ 0.015	33	28	84.85	1.701	8.955e-01	3.230	1.047e-01	0.94	7.990e-01	1.415			
Profile Likelihood													
<0.01	37	23	62.16	----	----	----	----	1.19	8.235e-01		6.48e-03	7.37e-03	1.83e-02
≥0.01	60	46	76.67	2.040	1.199	3.471	8.550e-03	0.94	7.934e-01	1.127			
Quantitative*													
	97	69	71.13	1.019	9.950e-01	1.044	1.194e-01				1.622e-01	1.242e-01	

*Units of pg / mL were used in **Quantitative model only**.

Cohort: Validation
Outcome: Progression Free Survival by DLCO (Lung Transplant is Censored)
Predictor: VCAM (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 222	20	12	60.00	----	----	----	----	1.13	8.235e-01		7.60e-02	5.30e-02	1.34e-02
[222,260)	20	17	85.00	2.591	1.186	5.660	1.690e-02	0.82	4.349e-01	9.768e-01			
[260,310)	19	12	63.16	1.150	5.035e-01	2.627	7.400e-01	1.08	9.030e-01				
[310,376)	20	15	75.00	1.090	4.988e-01	2.382	8.291e-01	1.51	7.251e-01				
≥ 376	20	15	75.00	1.779	8.046e-01	3.932	1.548e-01	0.81	5.800e-01	1.913			
Quartiles													
< 230	25	17	68.00	----	----	----	----	1.01	8.235e-01		2.59e-01	2.29e-01	2.62e-01
[230,285)	24	20	83.33	1.745	8.768e-01	3.474	1.128e-01	0.90	8.236e-01	1.117			
[285,358)	25	17	68.00	9.064e-01	4.546e-01	1.807	7.802e-01	1.51	7.251e-01				
≥ 358	25	17	68.00	1.072	5.406e-01	2.124	8.430e-01	0.98	5.935e-01	2.335			
Tertiles													
< 246	34	24	70.59	----	----	----	----	0.83	5.471e-01	2.198	8.73e-01	8.70e-01	8.64e-01
[246,334)	32	23	71.88	8.825e-01	4.926e-01	1.581	6.742e-01	1.02	9.030e-01	1.552			
≥ 334	33	24	72.73	8.678e-01	4.882e-01	1.543	6.289e-01	1.18	7.661e-01	1.913			
Profile Likelihood													
<284.7	49	37	75.51	----	----	----	----	0.94	8.236e-01	1.117	2.68e-01	2.66e-01	1.73e-01
≥284.7	50	34	68.00	7.630e-01	4.729e-01	1.231	2.677e-01	1.41	7.661e-01	1.609			
Quantitative	99	71	71.72	0.9998	0.9976	1.002	8.348e-01				8.337e-01	8.348e-01	

Cohort: **Validation**

Outcome: **Progression Free Survival by DLCO (Lung Transplant is Censored)**

Predictor: **S100A12 (ng / mL)**

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 36.6	20	15	75.00	----	----	----	----	0.86	6.647e-01		2.00e-01	1.69e-01	1.44e-01
[36.6,49.2)	19	11	57.89	6.048e-01	2.824e-01	1.295	1.956e-01	1.41	9.030e-01				
[49.2,65.9)	19	14	73.68	5.680e-01	2.594e-01	1.244	1.572e-01	0.98	7.990e-01	2.370			
[65.9,105)	20	16	80.00	6.516e-01	3.078e-01	1.379	2.629e-01	0.82	4.513e-01	1.913			
≥ 105	21	15	71.43	1.214	5.962e-01	2.472	5.928e-01	0.99	5.935e-01				
Quartiles													
< 39.7	25	19	76.00	----	----	----	----	0.90	6.647e-01	1.470	8.78e-01	8.78e-01	8.81e-01
[39.7,54.5)	24	16	66.67	7.580e-01	3.888e-01	1.478	4.160e-01	1.13	8.346e-01				
[54.5,82.8)	24	16	66.67	8.855e-01	4.531e-01	1.730	7.220e-01	0.98	7.661e-01				
≥ 82.8	26	20	76.92	8.518e-01	4.449e-01	1.631	6.282e-01	0.98	7.660e-01	2.094			
Tertiles													
< 43.9	34	24	70.59	----	----	----	----	1.02	8.538e-01	1.470	6.42e-01	6.46e-01	4.21e-01
[43.9,72.3)	31	21	67.74	8.148e-01	4.486e-01	1.480	5.010e-01	0.98	8.236e-01	2.335			
≥ 72.3	34	26	76.47	1.069	6.037e-01	1.892	8.197e-01	0.82	5.935e-01	1.511			
Profile Likelihood													
< 37.5	22	17	77.27	----	----	----	----	0.86	6.647e-01	1.470	1.60e-01	1.44e-01	1.39e-01
≥ 37.5	77	54	70.13	6.588e-01	3.746e-01	1.159	1.474e-01	0.99	8.235e-01	1.511			
Quantitative	99	71	71.72	0.9997	0.9953	1.004	9.046e-01				9.041e-01	9.046e-01	

Cohort: Validation

Outcome: Progression Free Survival by CPI (Lung Transplant is Censored)

Predictor: Age (years)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 61.6	19	12	63.16	----	----	----	----	0.73	4.594e-01		3.42e-01	3.32e-01	4.04e-01
[61.6,66.5)	20	14	70.00	2.104	9.516e-01	4.651	6.616e-02	0.59	4.513e-01				
[66.5,70.1)	20	14	70.00	1.127	5.114e-01	2.485	7.661e-01	0.99	6.265e-01				
[70.1,77.1)	20	18	90.00	1.502	7.148e-01	3.158	2.828e-01	0.98	6.895e-01	1.130			
≥ 77.1	20	18	90.00	1.674	7.838e-01	3.575	1.832e-01	0.85	7.251e-01	1.552			
Quartiles													
< 62.8	24	16	66.67	----	----	----	----	0.61	4.594e-01		7.47e-01	7.42e-01	6.45e-01
[62.8,68.4)	25	17	68.00	1.355	6.747e-01	2.722	3.930e-01	0.63	5.471e-01				
[68.4,75)	25	20	80.00	1.008	5.142e-01	1.974	9.825e-01	0.99	8.346e-01	1.130			
≥ 75	25	23	92.00	1.255	6.536e-01	2.410	4.949e-01	0.90	7.934e-01	1.415			
Tertiles													
< 65.3	33	23	69.70	----	----	----	----	0.61	5.471e-01	2.094	8.48e-01	8.45e-01	8.53e-01
[65.3,72.8)	33	24	72.73	1.017	5.671e-01	1.824	9.549e-01	0.98	8.236e-01	1.130			
≥ 72.8	33	29	87.88	1.157	6.642e-01	2.016	6.063e-01	0.85	7.251e-01	1.117			
Profile Likelihood													
<61.8	20	13	65.00	----	----	----	----	0.73	4.594e-01		2.68e-01	2.84e-01	4.57e-01
≥61.8	79	63	79.75	1.398	7.578e-01	2.578	2.838e-01	0.90	7.990e-01	1.015			
Quantitative													
	99	76	76.77	1.011	9.847e-01	1.038	4.172e-01				4.113e-01	4.173e-01	
Predictor: Gender													
Female	34	27	79.41	----	----	----	----	0.99	0.854	1.42			
Male	65	49	75.38	1.41	0.876	2.274	1.56E-01	0.80	0.613	0.98	1.51E-01	1.52E-01	

Cohort: Validation

Outcome: Progression Free Survival by CPI (Lung Transplant is Censored)

Predictor: Baseline (4-month) FVC % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 48.7	18	15	83.33	----	----	----	----	0.79	4.431e-01	2.335	5.61e-01	5.21e-01	4.95e-01
[48.7,54.9)	16	12	75.00	9.561e-01	4.471e-01	2.045	9.079e-01	0.90	4.759e-01				
[54.9,62)	17	16	94.12	1.603	7.725e-01	3.326	2.052e-01	0.82	5.471e-01	1.117			
[62,77.2)	17	13	76.47	1.092	5.138e-01	2.321	8.190e-01	0.98	6.046e-01				
≥ 77.2	18	13	72.22	8.627e-01	4.015e-01	1.854	7.051e-01	0.83	6.238e-01				
Quartiles													
< 49.7	21	18	85.71	----	----	----	----	0.79	4.513e-01	2.094	4.54e-01	4.54e-01	3.36e-01
[49.7,58.2)	22	17	77.27	1.242	6.358e-01	2.427	5.256e-01	0.69	4.950e-01	1.117			
[58.2,72.6)	22	18	81.82	1.409	7.245e-01	2.742	3.122e-01	0.77	5.307e-01	1.130			
≥ 72.6	21	16	76.19	8.363e-01	4.198e-01	1.666	6.112e-01	0.98	7.278e-01				
Tertiles													
< 51.8	28	22	78.57	----	----	----	----	0.79	4.513e-01	1.563	1.71e-01	1.50e-01	1.63e-01
[51.8,67.6)	30	25	83.33	1.606	8.898e-01	2.900	1.158e-01	0.73	5.307e-01	9.358e-01			
≥ 67.6	28	22	78.57	9.605e-01	5.250e-01	1.757	8.959e-01	0.98	6.238e-01	1.913			
Profile Likelihood													
< 73.3	65	53	81.54	----	----	----	----	0.79	6.046e-01	9.879e-01	2.12e-01	2.23e-01	6.71e-02
≥ 73.3	21	16	76.19	7.011e-01	3.946e-01	1.246	2.260e-01	0.98	7.278e-01				
Quantitative													
	86	69	80.23	9.987e-01	9.854e-01	1.012	8.490e-01				8.489e-01	8.490e-01	

Cohort: Validation

Outcome: Progression Free Survival by CPI (Lung Transplant is Censored)

Predictor: Baseline (4-month) DLco % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 30.1	17	10	58.82	----	----	----	----	0.99	4.349e-01		9.67e-01	9.67e-01	8.99e-01
[30.1,38.8)	15	13	86.67	8.475e-01	3.692e-01	1.945	6.962e-01	0.83	7.278e-01	2.370			
[38.8,46)	16	13	81.25	1.034	4.500e-01	2.375	9.375e-01	0.94	4.950e-01				
[46,62.2)	16	14	87.50	8.794e-01	3.889e-01	1.989	7.576e-01	0.85	6.265e-01				
≥ 62.2	17	15	88.24	1.074	4.764e-01	2.423	8.626e-01	0.58	5.307e-01	1.552			
Quartiles													
< 31.7	21	13	61.90	----	----	----	----	0.99	5.935e-01		5.83e-01	5.73e-01	4.08e-01
[31.7,43.7)	19	17	89.47	1.491	7.211e-01	3.083	2.811e-01	0.82	4.513e-01	1.415			
[43.7,56.5)	20	16	80.00	1.001	4.799e-01	2.086	9.988e-01	0.85	6.265e-01				
≥ 56.5	21	19	90.48	1.343	6.547e-01	2.754	4.212e-01	0.82	5.471e-01	1.130			
Tertiles													
< 34.6	27	18	66.67	----	----	----	----	0.99	5.935e-01	1.415	8.92e-01	8.91e-01	7.05e-01
[34.6,47.8)	27	24	88.89	1.049	5.681e-01	1.937	8.785e-01	0.85	6.127e-01	1.563			
≥ 47.8	27	23	85.19	1.159	6.195e-01	2.169	6.440e-01	0.69	5.608e-01	1.081			
Profile Likelihood													
< 32.3	22	13	59.09	----	----	----	----	0.99	5.935e-01		3.84e-01	3.95e-01	3.06e-01
≥ 32.3	59	52	88.14	1.303	7.073e-01	2.402	3.955e-01	0.82	6.127e-01	9.768e-01			
Quantitative													
	81	65	80.25	1.001	9.878e-01	1.014	9.139e-01				9.140e-01	9.139e-01	

Cohort: Validation

Outcome: Progression Free Survival by CPI (Lung Transplant is Censored)

Predictor: Baseline (4-month) CPI

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 41.2	17	14	82.35	----	----	----	----	0.90	5.553e-01		6.81e-01	6.58e-01	6.02e-01
[41.2,50.9)	15	13	86.67	1.131	5.213e-01	2.454	7.551e-01	0.85	6.265e-01				
[50.9,59.1)	17	15	88.24	1.536	7.249e-01	3.254	2.627e-01	0.73	4.950e-01	9.879e-01			
[59.1,65.3)	16	13	81.25	9.548e-01	4.406e-01	2.069	9.066e-01	0.94	4.431e-01				
≥ 65.3	16	10	62.50	8.813e-01	3.847e-01	2.019	7.650e-01	1.01	4.349e-01				
Quartiles													
< 44.4	21	18	85.71	----	----	----	----	0.85	5.471e-01	1.130	9.36e-01	9.39e-01	6.45e-01
[44.4,55.5)	19	16	84.21	9.721e-01	4.890e-01	1.933	9.358e-01	0.83	6.265e-01	1.913			
[55.5,64.1)	21	17	80.95	1.027	5.227e-01	2.018	9.383e-01	0.77	4.950e-01	1.563			
≥ 64.1	20	14	70.00	8.274e-01	4.055e-01	1.688	6.026e-01	1.01	4.349e-01	2.094			
Tertiles													
< 49.9	27	22	81.48	----	----	----	----	0.85	5.608e-01	1.470	8.33e-01	8.35e-01	8.29e-01
[49.9,60.6)	27	24	88.89	1.162	6.454e-01	2.093	6.163e-01	0.77	6.265e-01	9.879e-01			
≥ 60.6	27	19	70.37	9.846e-01	5.280e-01	1.836	9.611e-01	0.99	4.431e-01	1.415			
Profile Likelihood													
<59.1	49	42	85.71	----	----	----	----	0.77	6.238e-01	9.768e-01	3.32e-01	3.40e-01	1.36e-01
≥59.1	32	23	71.88	7.746e-01	4.597e-01	1.305	3.373e-01	0.99	5.935e-01	1.563			
Quantitative	81	65	80.25	1.000	9.827e-01	1.018	9.952e-01				9.952e-01	9.952e-01	

Cohort: Validation
Outcome: Progression Free Survival by CPI (Lung Transplant is Censored)
Predictor: Baseline (3-month) FVC % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 48.9	15	12	80.00	----	----	----	----	0.63	4.431e-01		8.29e-01	8.08e-01	6.35e-01
[48.9,55.7)	14	10	71.43	8.849e-01	3.812e-01	2.054	7.760e-01	1.12	4.759e-01				
[55.7,62)	13	12	92.31	1.395	6.149e-01	3.165	4.257e-01	0.82	4.349e-01				
[62,76.7)	16	12	75.00	8.972e-01	4.007e-01	2.009	7.919e-01	0.99	7.251e-01				
≥ 76.7	15	12	80.00	9.426e-01	4.147e-01	2.143	8.877e-01	0.73	5.608e-01				
Quartiles													
< 49.7	18	15	83.33	----	----	----	----	0.79	5.935e-01	2.094	7.97e-01	7.97e-01	5.53e-01
[49.7,58.8)	18	13	72.22	1.257	5.921e-01	2.667	5.519e-01	0.82	4.759e-01				
[58.8,73.3)	19	15	78.95	1.224	5.945e-01	2.519	5.837e-01	0.94	5.307e-01	1.552			
≥ 73.3	18	15	83.33	9.097e-01	4.384e-01	1.888	7.995e-01	0.85	6.238e-01	2.198			
Tertiles													
< 51.8	24	18	75.00	----	----	----	----	0.79	5.935e-01	2.094	1.66e-01	1.43e-01	1.47e-01
[51.8,68.1)	25	20	80.00	1.772	9.089e-01	3.455	9.302e-02	0.73	4.787e-01	1.117			
≥ 68.1	24	20	83.33	1.014	5.303e-01	1.939	9.665e-01	0.98	6.238e-01	1.913			
Profile Likelihood													
< 68.3	49	38	77.55	----	----	----	----	0.79	5.935e-01	1.007	3.85e-01	3.84e-01	8.91e-02
≥ 68.3	24	20	83.33	7.853e-01	4.521e-01	1.364	3.910e-01	0.98	6.238e-01	1.913			
Quantitative													
	73	58	79.45	1.001	9.862e-01	1.015	9.333e-01				9.333e-01	9.333e-01	

Cohort: Validation
Outcome: Progression Free Survival by CPI (Lung Transplant is Censored)
Predictor: Baseline (3-month) DLco % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 28.6	14	8	57.14	----	----	----	----	1.12	4.349e-01		9.94e-01	9.94e-01	9.93e-01
[28.6,38.3)	13	10	76.92	1.024	4.010e-01	2.614	9.606e-01	0.82	4.431e-01				
[38.3,46)	13	11	84.62	1.062	4.236e-01	2.661	8.982e-01	0.94	6.127e-01				
[46,61.3)	14	13	92.86	1.069	4.400e-01	2.599	8.824e-01	0.85	6.265e-01				
≥ 61.3	14	13	92.86	1.208	4.922e-01	2.964	6.802e-01	0.56	5.307e-01				
Quartiles													
< 30.9	18	10	55.56	----	----	----	----	0.99	5.935e-01		8.32e-01	8.39e-01	6.42e-01
[30.9,43.8)	16	14	87.50	1.357	5.999e-01	3.067	4.638e-01	0.94	3.637e-01				
[43.8,55.1)	16	14	87.50	1.302	5.759e-01	2.944	5.258e-01	0.85	6.238e-01	2.198			
≥ 55.1	18	17	94.44	1.421	6.423e-01	3.142	3.860e-01	0.63	5.553e-01	1.130			
Tertiles													
< 33.8	22	13	59.09	----	----	----	----	1.01	5.935e-01		5.33e-01	5.41e-01	2.02e-01
[33.8,47.4)	24	22	91.67	1.317	6.621e-01	2.619	4.328e-01	0.85	6.046e-01	1.563			
≥ 47.4	22	20	90.91	1.486	7.296e-01	3.025	2.753e-01	0.69	5.608e-01	1.081			
Profile Likelihood													
< 32.3	20	11	55.00	----	----	----	----	1.12	7.278e-01		1.71e-01	1.86e-01	1.25e-01
≥ 32.3	48	44	91.67	1.562	8.032e-01	3.037	1.888e-01	0.82	6.127e-01	9.879e-01			
Quantitative	68	55	80.88	1.002	9.885e-01	1.016	7.412e-01				7.424e-01	7.411e-01	

Cohort: Validation

Outcome: Progression Free Survival by CPI (Lung Transplant is Censored)

Predictor: Baseline (3-month) CPI

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 42.9	14	13	92.86	----	----	----	----	0.56	5.307e-01		5.46e-01	5.52e-01	4.12e-01
[42.9,51.7)	13	11	84.62	8.467e-01	3.699e-01	1.938	6.936e-01	0.85	8.236e-01				
[51.7,59.8)	14	12	85.71	8.670e-01	3.879e-01	1.938	7.281e-01	0.73	6.127e-01				
[59.8,66)	14	12	85.71	1.234	5.493e-01	2.774	6.102e-01	0.71	3.637e-01				
≥ 66	13	7	53.85	5.570e-01	2.181e-01	1.422	2.212e-01	1.12	4.349e-01				
Quartiles													
< 45.4	18	17	94.44	----	----	----	----	0.62	5.553e-01	1.130	9.45e-01	9.48e-01	9.28e-01
[45.4,56)	16	14	87.50	1.009	4.907e-01	2.077	9.796e-01	0.85	6.265e-01	1.913			
[56,64.8)	17	13	76.47	9.006e-01	4.321e-01	1.877	7.798e-01	0.82	7.251e-01				
≥ 64.8	17	11	64.71	8.163e-01	3.776e-01	1.765	6.059e-01	0.99	4.349e-01				
Tertiles													
< 50.3	22	20	90.91	----	----	----	----	0.85	5.608e-01	1.470	8.50e-01	8.55e-01	7.74e-01
[50.3,62.2)	24	20	83.33	1.136	6.040e-01	2.137	6.923e-01	0.73	6.265e-01	1.185			
≥ 62.2	22	15	68.18	9.401e-01	4.766e-01	1.854	8.585e-01	0.99	4.431e-01	2.094			
Profile Likelihood													
<66.1	55	48	87.27	----	----	----	----	0.82	6.127e-01	9.768e-01	1.52e-01	1.73e-01	1.28e-01
≥66.1	13	7	53.85	5.773e-01	2.590e-01	1.287	1.790e-01	1.12	4.349e-01				
Quantitative													
	68	55	80.88	9.969e-01	9.786e-01	1.016	7.462e-01				7.474e-01	7.461e-01	

Cohort: Validation

Outcome: Progression Free Survival by CPI (Lung Transplant is Censored)

Predictor: MMP7Elisa (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 3.41	19	16	84.21	----	----	----	----	0.63	5.307e-01	9.879e-01	4.41e-01	4.29e-01	4.79e-01
[3.41,4.56)	19	14	73.68	5.004e-01	2.384e-01	1.050	6.718e-02	1.02	7.251e-01				
[4.56,5.49)	20	18	90.00	7.692e-01	3.831e-01	1.545	4.607e-01	0.98	4.594e-01	2.045			
[5.49,7.52)	20	14	70.00	6.836e-01	3.274e-01	1.427	3.112e-01	0.85	6.127e-01	2.094			
≥ 7.52	21	14	66.67	6.115e-01	2.926e-01	1.278	1.910e-01	0.83	6.238e-01				
Quartiles													
< 3.54	24	19	79.17	----	----	----	----	0.85	6.046e-01	1.130	8.76e-01	8.73e-01	9.08e-01
[3.54,4.94)	24	20	83.33	1.234	6.497e-01	2.343	5.207e-01	0.77	5.935e-01	1.127			
[4.94,6.46)	25	20	80.00	1.010	5.324e-01	1.916	9.758e-01	0.98	4.950e-01	2.094			
≥ 6.46	26	17	65.38	9.634e-01	4.957e-01	1.873	9.125e-01	0.83	7.278e-01	1.552			
Tertiles													
< 3.99	33	26	78.79	----	----	----	----	0.85	6.265e-01	1.127	5.15e-01	5.11e-01	5.78e-01
[3.99,5.91)	32	29	90.62	1.251	7.314e-01	2.141	4.130e-01	0.90	5.553e-01	1.081			
≥ 5.91	34	21	61.76	9.117e-01	5.096e-01	1.631	7.553e-01	0.85	7.278e-01	1.470			
Profile Likelihood													
< 3.4	20	17	85.00	----	----	----	----	0.80	5.608e-01	9.879e-01	1.79e-01	1.62e-01	2.12e-01
≥ 3.4	79	59	74.68	6.707e-01	3.825e-01	1.176	1.633e-01	0.98	7.278e-01	1.117			
Quantitative													
	99	76	76.77	9.812e-01	9.106e-01	1.057	6.187e-01				6.115e-01	6.186e-01	

Cohort: Validation
Outcome: Progression Free Survival by CPI (Lung Transplant is Censored)
Predictor: ICAM (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 226	20	13	65.00	----	----	----	----	0.98	7.990e-01		1.05e-01	8.20e-02	5.07e-02
[226,281)	20	17	85.00	1.145	5.447e-01	2.409	7.203e-01	1.02	8.236e-01	2.198			
[281,326)	18	16	88.89	1.891	8.878e-01	4.029	9.864e-02	0.60	4.513e-01	9.386e-01			
[326,419)	20	15	75.00	2.212	1.021	4.792	4.411e-02	0.62	4.759e-01	1.322			
≥ 419	21	15	71.43	9.899e-01	4.601e-01	2.130	9.794e-01	1.47	6.127e-01	2.370			
Quartiles													
< 238	25	17	68.00	----	----	----	----	0.98	7.990e-01		3.14e-01	2.86e-01	1.76e-01
[238,303)	24	21	87.50	1.331	6.931e-01	2.555	3.906e-01	0.90	7.661e-01	1.180			
[303,387)	24	19	79.17	1.799	9.203e-01	3.516	8.594e-02	0.58	4.513e-01	1.322			
≥ 387	26	19	73.08	1.081	5.536e-01	2.111	8.197e-01	1.02	6.127e-01	2.094			
Tertiles													
< 258	34	25	73.53	----	----	----	----	0.99	8.235e-01	1.180	4.33e-02	3.32e-02	1.57e-02
[258,367)	31	27	87.10	2.019	1.154	3.531	1.377e-02	0.73	5.471e-01	9.030e-01			
≥ 367	34	24	70.59	1.210	6.854e-01	2.135	5.114e-01	0.99	6.127e-01	1.552			
Profile Likelihood													
<258.3	34	25	73.53	----	----	----	----	0.99	8.235e-01	1.180	8.25e-02	8.60e-02	3.99e-03
≥258.3	65	51	78.46	1.528	9.369e-01	2.492	8.938e-02	0.79	6.127e-01	9.768e-01			
Quantitative													
	99	76	76.77	0.9998	0.9978	1.002	8.529e-01				8.526e-01	8.529e-01	

Cohort: **Validation**

Outcome: **Progression Free Survival by CPI (Lung Transplant is Censored)**

Predictor: **IL8 (ng / mL)**

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 0.00767	19	14	73.68	----	----	----	----	0.98	6.895e-01		2.47e-01	2.23e-01	3.35e-01
[0.00767,0.0101)	20	14	70.00	2.116	9.679e-01	4.626	6.036e-02	0.82	7.251e-01				
[0.0101,0.0131)	18	14	77.78	1.455	6.767e-01	3.131	3.368e-01	0.56	4.759e-01				
[0.0131,0.0178)	20	14	70.00	1.441	7.010e-01	2.961	3.204e-01	0.83	7.990e-01				
≥ 0.0178	20	18	90.00	9.381e-01	4.400e-01	2.000	8.687e-01	0.94	6.238e-01	1.470			
Quartiles													
< 0.00825	24	17	70.83	----	----	----	----	0.98	6.895e-01	2.299	1.15e-01	8.94e-02	1.67e-01
[0.00825,0.0112)	24	17	70.83	2.320	1.159	4.644	1.749e-02	0.82	5.800e-01				
[0.0112,0.0164)	24	18	75.00	1.435	7.463e-01	2.759	2.790e-01	0.63	4.759e-01	1.015			
≥ 0.0164	25	22	88.00	1.233	6.185e-01	2.459	5.517e-01	0.98	7.661e-01	1.470			
Tertiles													
< 0.00959	32	21	65.62	----	----	----	----	0.98	8.235e-01	2.299	7.99e-02	8.83e-02	1.03e-01
[0.00959,0.015)	32	25	78.12	1.764	9.845e-01	3.161	5.646e-02	0.73	5.553e-01	1.130			
≥ 0.015	33	28	84.85	1.805	9.937e-01	3.280	5.248e-02	0.85	6.265e-01	1.117			
Profile Likelihood													
< 0.0093	29	19	65.52	----	----	----	----	0.99	9.386e-01		1.22e-02	1.48e-02	1.60e-02
≥ 0.0093	68	55	80.88	1.941	1.127	3.344	1.687e-02	0.82	6.265e-01	9.879e-01			
Quantitative *													
	97	74	76.29	1.013	9.876e-01	1.040	3.154e-01				3.464e-01	3.191e-01	

*Units of pg / mL were used in **Quantitative model only**.

Cohort: Validation

Outcome: Progression Free Survival by CPI (Lung Transplant is Censored)

Predictor: VCAM (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 222	20	12	60.00	----	----	----	----	1.13	8.235e-01		7.35e-02	6.40e-02	1.11e-01
[222,260)	20	17	85.00	2.942	1.352	6.402	6.534e-03	0.79	4.349e-01	9.768e-01			
[260,310)	19	15	78.95	1.524	6.977e-01	3.331	2.904e-01	0.99	9.030e-01	1.322			
[310,376)	20	16	80.00	1.526	7.052e-01	3.301	2.833e-01	0.85	6.238e-01	2.094			
≥ 376	20	16	80.00	2.079	9.550e-01	4.526	6.518e-02	0.73	4.787e-01	1.563			
Quartiles													
< 230	25	16	64.00	----	----	----	----	1.01	8.235e-01		2.41e-01	2.46e-01	1.32e-01
[230,285)	24	21	87.50	2.020	1.015	4.020	4.523e-02	0.90	7.934e-01	1.015			
[285,358)	25	21	84.00	1.489	7.658e-01	2.895	2.407e-01	0.73	6.127e-01	1.180			
≥ 358	25	18	72.00	1.345	6.763e-01	2.675	3.980e-01	0.77	5.800e-01	1.913			
Tertiles													
< 246	34	24	70.59	----	----	----	----	0.82	5.471e-01	2.198	9.59e-01	9.59e-01	5.03e-01
[246,334)	32	26	81.25	1.039	5.909e-01	1.828	8.934e-01	0.94	7.251e-01	1.117			
≥ 334	33	26	78.79	1.087	6.186e-01	1.909	7.726e-01	0.77	5.935e-01	1.470			
Profile Likelihood													
<227.6	24	15	62.50	----	----	----	----	1.13	8.235e-01		6.16e-02	7.36e-02	1.32e-01
≥227.6	75	61	81.33	1.700	9.464e-01	3.052	7.581e-02	0.82	6.265e-01	9.768e-01			
Quantitative	99	76	76.77	1.001	0.999	1.003	2.541e-01				2.658e-01	2.548e-01	

Cohort: **Validation**

Outcome: **Progression Free Survival by CPI (Lung Transplant is Censored)**

Predictor: **S100A12 (ng / mL)**

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 36.6	20	17	85.00	----	----	----	----	0.85	5.608e-01	1.322	2.54e-01	2.70e-01	2.09e-01
[36.6,49.2)	19	14	73.68	7.506e-01	3.707e-01	1.520	4.253e-01	0.63	5.471e-01				
[49.2,65.9)	19	13	68.42	7.395e-01	3.618e-01	1.512	4.082e-01	0.98	8.346e-01				
[65.9,105)	20	16	80.00	4.810e-01	2.287e-01	1.012	5.365e-02	0.82	4.513e-01	1.913			
≥ 105	21	16	76.19	1.016	5.101e-01	2.024	9.636e-01	0.85	5.935e-01	2.094			
Quartiles													
< 39.7	25	21	84.00	----	----	----	----	0.90	5.800e-01	1.322	8.19e-01	8.25e-01	8.42e-01
[39.7,54.5)	24	18	75.00	8.550e-01	4.542e-01	1.609	6.273e-01	0.94	6.238e-01	2.335			
[54.5,82.8)	24	16	66.67	7.731e-01	4.014e-01	1.489	4.417e-01	0.98	6.046e-01				
≥ 82.8	26	21	80.77	1.017	5.502e-01	1.878	9.581e-01	0.82	6.127e-01	1.185			
Tertiles													
< 43.9	34	28	82.35	----	----	----	----	0.90	5.608e-01	1.130	1.68e-01	1.80e-01	1.48e-01
[43.9,72.3)	31	21	67.74	6.477e-01	3.635e-01	1.154	1.406e-01	0.98	7.990e-01	2.335			
≥ 72.3	34	27	79.41	1.087	6.363e-01	1.858	7.596e-01	0.79	5.935e-01	1.015			
Profile Likelihood													
< 37.5	22	19	86.36	----	----	----	----	0.85	5.608e-01	1.081	1.58e-01	1.46e-01	9.12e-02
≥ 37.5	77	57	74.03	6.722e-01	3.936e-01	1.148	1.457e-01	0.85	7.278e-01	1.117			
Quantitative	99	76	76.77	1.001	0.9964	1.005	7.485e-01				7.515e-01	7.484e-01	

Cohort: Validation

Outcome: Progression Free Survival by FVC (Lung Transplant counts as event)

Predictor: Age (years)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 61.6	19	13	68.42	----	----	----	----	1.05	7.661e-01		1.20e-02	2.95e-03	2.24e-03
[61.6,66.5)	20	19	95.00	3.225	1.551	6.709	1.725e-03	0.53	3.993e-01	9.386e-01			
[66.5,70.1)	20	15	75.00	1.089	5.176e-01	2.290	8.227e-01	0.86	6.515e-01				
[70.1,77.1)	20	14	70.00	1.095	5.096e-01	2.351	8.167e-01	1.13	7.990e-01				
≥ 77.1	20	15	75.00	1.429	6.732e-01	3.035	3.524e-01	0.85	7.251e-01				
Quartiles													
< 62.8	24	17	70.83	----	----	----	----	0.77	7.660e-01	2.702	8.53e-02	5.72e-02	8.85e-02
[62.8,68.4)	25	23	92.00	1.895	9.973e-01	3.602	5.096e-02	0.60	5.202e-01	9.770e-01			
[68.4,75)	25	18	72.00	9.116e-01	4.692e-01	1.771	7.848e-01	0.99	7.990e-01				
≥ 75	25	18	72.00	9.596e-01	4.917e-01	1.873	9.038e-01	1.51	7.934e-01				
Tertiles													
< 65.3	33	26	78.79	----	----	----	----	0.77	5.935e-01	1.218	6.27e-01	6.35e-01	8.52e-01
[65.3,72.8)	33	27	81.82	9.596e-01	5.590e-01	1.647	8.811e-01	0.86	5.285e-01	1.130			
≥ 72.8	33	23	69.70	7.726e-01	4.391e-01	1.360	3.709e-01	1.26	7.934e-01	2.335			
Profile Likelihood													
<68.8	52	43	82.69	----	----	----	----	0.77	5.471e-01	9.386e-01	3.07e-02	2.99e-02	1.24e-02
≥68.8	47	33	70.21	6.064e-01	3.842e-01	9.571e-01	3.171e-02	1.26	8.538e-01	1.913			
Quantitative													
	99	76	76.77	9.899e-01	9.655e-01	1.015	4.278e-01				4.336e-01	4.279e-01	
Predictor: Gender													
Female	34	22	64.71	----	----	----	----	1.18	0.939	3.56			
Male	65	54	83.08	1.93	1.166	3.205	1.06E-02	0.77	0.605	0.99	7.92E-03	9.35E-03	

Cohort: **Validation**

Outcome: **Progression Free Survival by FVC (Lung Transplant counts as event)**

Predictor: **Baseline (4-month) FVC % Predicted**

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 48.7	18	16	88.89	----	----	----	----	0.99	3.856e-01	2.888	1.07e-02	1.79e-02	9.85e-02
[48.7,54.9)	16	15	93.75	1.604	7.828e-01	3.285	1.968e-01	0.63	2.677e-01	2.094			
[54.9,62)	17	14	82.35	1.440	6.828e-01	3.038	3.380e-01	0.82	5.471e-01				
[62,77.2)	17	14	82.35	1.251	6.011e-01	2.604	5.491e-01	0.73	5.285e-01	1.511			
≥ 77.2	18	9	50.00	4.315e-01	1.896e-01	9.821e-01	4.517e-02	2.20	1.264				
Quartiles													
< 49.7	21	19	90.48	----	----	----	----	1.01	4.513e-01	2.335	6.65e-03	9.09e-03	3.66e-02
[49.7,58.2)	22	18	81.82	1.506	7.787e-01	2.914	2.236e-01	0.55	4.759e-01	1.218			
[58.2,72.6)	22	19	86.36	1.498	7.784e-01	2.884	2.263e-01	0.73	5.285e-01	9.386e-01			
≥ 72.6	21	12	57.14	4.979e-01	2.407e-01	1.030	6.006e-02	1.93	1.264				
Tertiles													
< 51.8	28	26	92.86	----	----	----	----	0.79	3.856e-01	1.218	5.48e-03	6.99e-03	1.10e-01
[51.8,67.6)	30	25	83.33	1.268	7.184e-01	2.238	4.127e-01	0.77	5.285e-01	9.386e-01			
≥ 67.6	28	17	60.71	4.726e-01	2.527e-01	8.836e-01	1.890e-02	1.51	7.995e-01				
Profile Likelihood													
< 76.1	68	59	86.76	----	----	----	----	0.77	6.046e-01	9.879e-01	7.84e-04	1.83e-03	2.18e-02
≥ 76.1	18	9	50.00	3.415e-01	1.683e-01	6.928e-01	2.912e-03	2.20	1.264				
Quantitative	86	68	79.07	9.846e-01	9.723e-01	9.971e-01	1.561e-02				1.383e-02	1.480e-02	

Cohort: Validation
Outcome: Progression Free Survival by FVC (Lung Transplant counts as event)
Predictor: Baseline (4-month) DLco % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 30.1	17	16	94.12	----	----	----	----	0.43	3.062e-01	1.127	4.50e-03	1.92e-03	4.69e-01
[30.1,38.8)	15	15	100.00	5.261e-01	2.544e-01	1.088	8.317e-02	0.82	6.515e-01	2.094			
[38.8,46)	16	13	81.25	4.722e-01	2.208e-01	1.010	5.310e-02	0.77	4.977e-01	2.702			
[46,62.2)	16	10	62.50	2.547e-01	1.130e-01	5.741e-01	9.731e-04	1.26	8.538e-01				
≥ 62.2	17	9	52.94	2.572e-01	1.122e-01	5.899e-01	1.343e-03	1.51	8.620e-01				
Quartiles													
< 31.7	21	20	95.24	----	----	----	----	0.59	3.068e-01	1.180	6.50e-03	5.49e-03	2.49e-02
[31.7,43.7)	19	18	94.74	7.885e-01	4.098e-01	1.517	4.768e-01	0.70	4.950e-01	1.913			
[43.7,56.5)	20	12	60.00	3.257e-01	1.556e-01	6.817e-01	2.912e-03	1.56	7.660e-01				
≥ 56.5	21	13	61.90	4.256e-01	2.097e-01	8.639e-01	1.802e-02	0.98	8.236e-01				
Tertiles													
< 34.6	27	26	96.30	----	----	----	----	0.65	3.226e-01	1.051	5.99e-03	5.57e-03	9.45e-01
[34.6,47.8)	27	23	85.19	6.294e-01	3.544e-01	1.118	1.141e-01	0.77	5.285e-01	1.913			
≥ 47.8	27	14	51.85	3.557e-01	1.851e-01	6.837e-01	1.932e-03	1.51	9.386e-01				
Profile Likelihood													
< 42.6	39	37	94.87	----	----	----	----	0.65	4.710e-01	9.879e-01	5.05e-04	3.96e-04	2.15e-01
≥ 42.6	42	26	61.90	4.083e-01	2.449e-01	6.807e-01	5.935e-04	1.26	8.538e-01	2.888			
Quantitative													
	81	63	77.78	9.746e-01	9.595e-01	9.898e-01	1.162e-03				4.196e-04	1.018e-03	

Cohort: Validation
Outcome: Progression Free Survival by FVC (Lung Transplant counts as event)
Predictor: Baseline (4-month) CPI

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 41.2	17	9	52.94	----	----	----	----	1.51	8.236e-01		2.70e-02	2.03e-02	2.13e-01
[41.2,50.9)	15	10	66.67	1.177	4.762e-01	2.908	7.243e-01	1.26	8.538e-01				
[50.9,59.1)	17	14	82.35	2.286	9.861e-01	5.299	5.394e-02	0.73	4.950e-01				
[59.1,65.3)	16	15	93.75	1.782	7.686e-01	4.130	1.782e-01	0.77	4.977e-01	2.702			
≥ 65.3	16	15	93.75	3.331	1.439	7.712	4.971e-03	0.45	3.062e-01	1.180			
Quartiles													
< 44.4	21	11	52.38	----	----	----	----	1.13	8.236e-01		1.33e-02	1.28e-02	4.22e-01
[44.4,55.5)	19	13	68.42	1.211	5.415e-01	2.709	6.407e-01	0.99	8.346e-01				
[55.5,64.1)	21	20	95.24	2.470	1.172	5.208	1.748e-02	0.70	4.950e-01	1.563			
≥ 64.1	20	19	95.00	2.633	1.244	5.572	1.134e-02	0.47	3.068e-01	1.180			
Tertiles													
< 49.9	27	16	59.26	----	----	----	----	1.26	8.620e-01		2.85e-02	2.50e-02	3.29e-01
[49.9,60.6)	27	21	77.78	1.463	7.597e-01	2.816	2.552e-01	0.77	6.046e-01	1.927			
≥ 60.6	27	26	96.30	2.305	1.231	4.314	9.041e-03	0.59	3.856e-01	1.127			
Profile Likelihood													
<53.0	36	21	58.33	----	----	----	----	1.26	8.620e-01		3.06e-04	3.20e-04	2.43e-01
≥53.0	45	42	93.33	2.585	1.513	4.418	5.137e-04	0.70	4.759e-01	9.879e-01			
Quantitative	81	63	77.78	1.036	1.015	1.057	7.865e-04				3.017e-04	6.550e-04	

Cohort: **Validation**

Outcome: **Progression Free Survival by FVC (Lung Transplant counts as event)**

Predictor: **Baseline (3-month) FVC % Predicted**

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 48.9	15	13	86.67	----	----	----	----	0.99	3.856e-01		2.19e-02	3.64e-02	2.00e-01
[48.9,55.7)	14	12	85.71	1.352	6.097e-01	3.000	4.576e-01	0.77	2.677e-01				
[55.7,62)	13	12	92.31	1.441	6.435e-01	3.226	3.745e-01	0.82	4.710e-01				
[62,76.7)	16	13	81.25	1.061	4.860e-01	2.316	8.821e-01	0.76	6.046e-01	1.913			
≥ 76.7	15	8	53.33	3.830e-01	1.575e-01	9.314e-01	3.428e-02	2.20	7.995e-01				
Quartiles													
< 49.7	18	16	88.89	----	----	----	----	0.99	3.856e-01	2.702	1.24e-02	1.70e-02	8.16e-02
[49.7,58.8)	18	15	83.33	1.501	7.269e-01	3.098	2.724e-01	0.77	4.710e-01	1.218			
[58.8,73.3)	19	16	84.21	1.317	6.485e-01	2.674	4.463e-01	0.70	5.285e-01	1.130			
≥ 73.3	18	11	61.11	4.595e-01	2.122e-01	9.953e-01	4.861e-02	1.91	1.264				
Tertiles													
< 51.8	24	22	91.67	----	----	----	----	0.79	3.856e-01	1.218	3.48e-03	4.47e-03	8.11e-02
[51.8,68.1)	25	21	84.00	1.324	7.110e-01	2.464	3.765e-01	0.73	4.977e-01	9.386e-01			
≥ 68.1	24	15	62.50	4.272e-01	2.172e-01	8.405e-01	1.377e-02	1.51	7.995e-01				
Profile Likelihood													
< 68.3	49	43	87.76	----	----	----	----	0.77	5.285e-01	9.879e-01	1.17e-03	1.64e-03	3.88e-02
≥ 68.3	24	15	62.50	3.820e-01	2.057e-01	7.096e-01	2.322e-03	1.51	7.995e-01				
Quantitative													
	73	58	79.45	9.834e-01	9.707e-01	9.964e-01	1.217e-02				1.141e-02	1.135e-02	

Cohort: Validation

Outcome: Progression Free Survival by FVC (Lung Transplant counts as event)

Predictor: Baseline (3-month) DLco % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 28.6	14	13	92.86	----	----	----	----	0.37	2.843e-01	1.218	5.41e-03	2.81e-03	4.21e-01
[28.6,38.3)	13	13	100.00	7.647e-01	3.497e-01	1.672	5.015e-01	0.70	4.595e-01				
[38.3,46)	13	10	76.92	4.044e-01	1.699e-01	9.626e-01	4.074e-02	0.77	5.285e-01				
[46,61.3)	14	9	64.29	2.574e-01	1.061e-01	6.242e-01	2.676e-03	1.26	8.538e-01				
≥ 61.3	14	8	57.14	2.651e-01	1.076e-01	6.530e-01	3.897e-03	1.51	8.620e-01				
Quartiles													
< 30.9	18	17	94.44	----	----	----	----	0.53	3.062e-01	1.180	4.09e-02	2.90e-02	3.15e-01
[30.9,43.8)	16	14	87.50	6.177e-01	2.967e-01	1.286	1.979e-01	0.70	4.977e-01	2.094			
[43.8,55.1)	16	11	68.75	4.000e-01	1.825e-01	8.768e-01	2.211e-02	1.26	7.251e-01				
≥ 55.1	18	11	61.11	3.674e-01	1.706e-01	7.912e-01	1.052e-02	1.13	8.620e-01				
Tertiles													
< 33.8	22	21	95.45	----	----	----	----	0.59	3.068e-01	1.127	9.55e-03	8.26e-03	9.42e-01
[33.8,47.4)	24	20	83.33	5.883e-01	3.091e-01	1.120	1.063e-01	0.77	5.285e-01	2.198			
≥ 47.4	22	12	54.55	3.377e-01	1.649e-01	6.913e-01	2.979e-03	1.39	9.386e-01				
Profile Likelihood													
< 39.5	28	27	96.43	----	----	----	----	0.50	3.856e-01	1.007	1.34e-04	5.73e-05	4.38e-02
≥ 39.5	40	26	65.00	3.260e-01	1.838e-01	5.781e-01	1.256e-04	1.26	8.620e-01	2.702			
Quantitative	68	53	77.94	9.744e-01	9.584e-01	9.907e-01	2.167e-03				8.811e-04	1.932e-03	

Cohort: Validation
Outcome: Progression Free Survival by FVC (Lung Transplant counts as event)
Predictor: Baseline (3-month) CPI

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 42.9	14	8	57.14	----	----	----	----	1.13	8.236e-01		4.22e-02	3.15e-02	2.06e-01
[42.9,51.7)	13	9	69.23	1.043	3.987e-01	2.728	9.320e-01	1.55	9.386e-01				
[51.7,59.8)	14	10	71.43	1.366	5.362e-01	3.481	5.133e-01	0.77	5.285e-01				
[59.8,66)	14	14	100.00	2.548	1.058	6.141	3.708e-02	0.62	4.595e-01	2.094			
≥ 66	13	12	92.31	2.876	1.154	7.169	2.336e-02	0.47	2.843e-01				
Quartiles													
< 45.4	18	11	61.11	----	----	----	----	1.26	8.620e-01		1.07e-02	6.79e-03	6.93e-01
[45.4,56)	16	10	62.50	1.168	4.943e-01	2.761	7.232e-01	0.99	7.660e-01				
[56,64.8)	17	16	94.12	2.050	9.431e-01	4.456	6.999e-02	0.73	5.285e-01	2.094			
≥ 64.8	17	16	94.12	3.368	1.525	7.441	2.671e-03	0.47	3.062e-01	1.127			
Tertiles													
< 50.3	22	14	63.64	----	----	----	----	1.39	9.386e-01		4.36e-03	2.13e-03	3.93e-01
[50.3,62.2)	24	18	75.00	1.342	6.620e-01	2.721	4.144e-01	0.82	6.515e-01	2.702			
≥ 62.2	22	21	95.45	3.073	1.539	6.136	1.461e-03	0.47	3.068e-01	1.051			
Profile Likelihood													
<53.0	29	17	58.62	----	----	----	----	1.51	9.386e-01		2.06e-04	2.14e-04	1.14e-01
≥53.0	39	36	92.31	2.934	1.618	5.322	3.947e-04	0.70	4.759e-01	9.879e-01			
Quantitative	68	53	77.94	1.037	1.014	1.060	1.401e-03				5.430e-04	1.163e-03	

Cohort: Validation
Outcome: Progression Free Survival by FVC (Lung Transplant counts as event)
Predictor: MMP7Elisa (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 3.41	19	14	73.68	----	----	----	----	0.85	7.990e-01		3.39e-01	3.07e-01	3.57e-01
[3.41,4.56)	19	13	68.42	7.281e-01	3.391e-01	1.563	4.157e-01	1.13	7.251e-01				
[4.56,5.49)	20	14	70.00	7.387e-01	3.484e-01	1.566	4.296e-01	0.99	4.595e-01				
[5.49,7.52)	20	17	85.00	1.446	7.058e-01	2.961	3.137e-01	0.58	4.710e-01	1.051			
≥ 7.52	21	18	85.71	9.994e-01	4.917e-01	2.031	9.986e-01	1.18	6.515e-01	1.927			
Quartiles													
< 3.54	24	17	70.83	----	----	----	----	0.94	8.236e-01		4.61e-01	4.60e-01	2.99e-01
[3.54,4.94)	24	15	62.50	9.741e-01	4.849e-01	1.957	9.412e-01	1.13	6.790e-01				
[4.94,6.46)	25	21	84.00	1.402	7.370e-01	2.668	3.030e-01	0.58	3.856e-01	2.094			
≥ 6.46	26	23	88.46	1.458	7.762e-01	2.738	2.412e-01	0.82	6.515e-01	1.552			
Tertiles													
< 3.99	33	22	66.67	----	----	----	----	0.98	8.236e-01		2.91e-01	2.85e-01	1.60e-01
[3.99,5.91)	32	25	78.12	1.235	6.941e-01	2.199	4.724e-01	0.73	4.950e-01	2.045			
≥ 5.91	34	29	85.29	1.558	8.929e-01	2.720	1.185e-01	0.79	5.285e-01	1.264			
Profile Likelihood													
< 4.7	43	28	65.12	----	----	----	----	0.99	8.236e-01	1.913	4.18e-02	4.29e-02	2.46e-02
≥ 4.7	56	48	85.71	1.614	1.010	2.578	4.522e-02	0.77	5.202e-01	1.051			
Quantitative													
	99	76	76.77	1.013	9.543e-01	1.076	6.682e-01				6.735e-01	6.681e-01	

Cohort: Validation
Outcome: Progression Free Survival by FVC (Lung Transplant counts as event)
Predictor: ICAM (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 226	20	13	65.00	----	----	----	----	0.86	7.990e-01		4.01e-02	3.82e-02	1.60e-01
[226,281)	20	12	60.00	7.829e-01	3.555e-01	1.724	5.434e-01	1.18	9.770e-01				
[281,326)	18	14	77.78	1.552	7.157e-01	3.366	2.657e-01	0.85	4.595e-01				
[326,419)	20	18	90.00	2.222	1.076	4.587	3.085e-02	0.58	4.759e-01	1.322			
≥ 419	21	19	90.48	1.647	8.008e-01	3.387	1.750e-01	0.77	5.935e-01	2.094			
Quartiles													
< 238	25	16	64.00	----	----	----	----	0.86	7.995e-01		1.01e-02	8.49e-03	5.37e-02
[238,303)	24	14	58.33	8.633e-01	4.201e-01	1.774	6.891e-01	1.70	9.770e-01				
[303,387)	24	23	95.83	2.263	1.187	4.316	1.314e-02	0.58	4.595e-01	1.051			
≥ 387	26	23	88.46	1.781	9.311e-01	3.408	8.108e-02	0.76	5.285e-01	1.563			
Tertiles													
< 258	34	20	58.82	----	----	----	----	1.13	8.346e-01		4.24e-03	5.83e-03	5.50e-02
[258,367)	31	25	80.65	2.349	1.272	4.339	6.375e-03	0.77	5.471e-01	1.322			
≥ 367	34	31	91.18	2.310	1.298	4.113	4.432e-03	0.70	5.202e-01	1.511			
Profile Likelihood													
<262.0	35	20	57.14	----	----	----	----	1.13	8.620e-01		5.22e-04	7.54e-04	8.09e-03
≥262.0	64	56	87.50	2.419	1.424	4.110	1.082e-03	0.73	5.800e-01	9.879e-01			
Quantitative	99	76	76.77	1.002	1.000	1.005	2.079e-02				2.284e-02	2.004e-02	

Cohort: **Validation**

Outcome: **Progression Free Survival by FVC (Lung Transplant counts as event)**

Predictor: **IL8 (ng / mL)**

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 0.00767	19	14	73.68	----	----	----	----	0.77	7.032e-01		8.96e-01	8.95e-01	8.95e-01
[0.00767,0.0101)	20	17	85.00	1.385	6.210e-01	3.087	4.264e-01	0.86	7.251e-01				
[0.0101,0.0131)	18	12	66.67	1.365	6.650e-01	2.801	3.965e-01	0.55	4.349e-01				
[0.0131,0.0178)	20	18	90.00	1.089	5.096e-01	2.328	8.255e-01	0.83	7.990e-01	2.335			
≥ 0.0178	20	14	70.00	1.215	5.811e-01	2.540	6.050e-01	0.99	5.935e-01				
Quartiles													
< 0.00825	24	19	79.17	----	----	----	----	0.77	6.515e-01	2.198	6.05e-01	5.81e-01	5.21e-01
[0.00825,0.0112)	24	18	75.00	1.404	7.364e-01	2.676	3.028e-01	0.82	5.800e-01				
[0.0112,0.0164)	24	20	83.33	9.176e-01	4.768e-01	1.766	7.968e-01	0.80	4.710e-01	1.697			
≥ 0.0164	25	18	72.00	1.056	5.437e-01	2.052	8.716e-01	1.13	7.661e-01	2.888			
Tertiles													
< 0.00959	32	24	75.00	----	----	----	----	0.86	7.660e-01	1.322	5.83e-01	5.73e-01	5.75e-01
[0.00959,0.015)	32	26	81.25	1.077	6.108e-01	1.899	7.975e-01	0.79	5.471e-01	1.697			
≥ 0.015	33	25	75.76	1.336	7.577e-01	2.357	3.164e-01	0.99	7.634e-01	1.563			
Profile Likelihood													
< 0.0092	28	20	71.43	----	----	----	----	0.94	7.660e-01		2.25e-01	2.33e-01	1.81e-01
≥ 0.0092	69	55	79.71	1.372	8.125e-01	2.318	2.365e-01	0.82	6.790e-01	1.180			
Quantitative*													
	97	75	77.32	1.003	9.740e-01	1.034	8.189e-01				8.217e-01	8.190e-01	

*Units of pg / mL were used in **Quantitative model only**.

Cohort: Validation

Outcome: Progression Free Survival by FVC (Lung Transplant counts as event)

Predictor: VCAM (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 222	20	17	85.00	----	----	----	----	0.82	7.661e-01		5.91e-01	5.96e-01	5.95e-01
[222,260)	20	17	85.00	1.134	5.760e-01	2.233	7.157e-01	0.79	5.471e-01	2.198			
[260,310)	19	12	63.16	7.224e-01	3.434e-01	1.519	3.913e-01	0.99	7.660e-01				
[310,376)	20	14	70.00	7.104e-01	3.488e-01	1.447	3.462e-01	1.26	7.251e-01				
≥ 376	20	16	80.00	1.048	5.256e-01	2.088	8.949e-01	0.76	5.202e-01				
Quartiles													
< 230	25	22	88.00	----	----	----	----	0.82	6.515e-01	2.198	9.28e-01	9.28e-01	9.32e-01
[230,285)	24	17	70.83	9.011e-01	4.755e-01	1.708	7.495e-01	0.85	7.660e-01				
[285,358)	25	18	72.00	8.066e-01	4.308e-01	1.510	5.018e-01	1.18	6.046e-01	2.094			
≥ 358	25	19	76.00	9.174e-01	4.957e-01	1.698	7.836e-01	0.76	5.800e-01	2.335			
Tertiles													
< 246	34	30	88.24	----	----	----	----	0.80	6.515e-01	1.051	2.60e-01	2.60e-01	2.32e-01
[246,334)	32	20	62.50	6.243e-01	3.535e-01	1.102	1.044e-01	0.99	8.620e-01	2.370			
≥ 334	33	26	78.79	8.096e-01	4.774e-01	1.373	4.330e-01	0.77	5.935e-01	1.913			
Profile Likelihood													
<246.8	34	30	88.24	----	----	----	----	0.80	6.515e-01	1.051	1.65e-01	1.56e-01	9.51e-02
≥246.8	65	46	70.77	7.171e-01	4.514e-01	1.139	1.590e-01	0.99	7.634e-01	1.563			
Quantitative	99	76	76.77	0.9998	0.9977	1.002	8.614e-01				8.606e-01	8.614e-01	

Cohort: Validation
Outcome: Progression Free Survival by FVC (Lung Transplant counts as event)
Predictor: S100A12 (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 36.6	20	15	75.00	----	----	----	----	0.82	7.251e-01	1.697	1.09e-01	9.03e-02	3.61e-02
[36.6,49.2)	19	12	63.16	7.435e-01	3.579e-01	1.544	4.268e-01	1.26	9.386e-01				
[49.2,65.9)	19	13	68.42	5.427e-01	2.515e-01	1.171	1.193e-01	1.05	6.515e-01				
[65.9,105)	20	19	95.00	6.158e-01	2.900e-01	1.308	2.071e-01	0.77	4.513e-01	1.180			
≥ 105	21	17	80.95	1.314	6.653e-01	2.595	4.317e-01	0.70	4.349e-01	2.094			
Quartiles													
< 39.7	25	18	72.00	----	----	----	----	0.86	7.634e-01	1.697	3.80e-01	4.03e-01	3.46e-01
[39.7,54.5)	24	16	66.67	6.561e-01	3.311e-01	1.300	2.271e-01	2.20	8.346e-01				
[54.5,82.8)	24	20	83.33	1.138	5.987e-01	2.164	6.928e-01	0.80	5.202e-01	1.511			
≥ 82.8	26	22	84.62	9.910e-01	5.196e-01	1.890	9.782e-01	0.77	4.710e-01	1.552			
Tertiles													
< 43.9	34	24	70.59	----	----	----	----	0.99	8.236e-01	1.697	3.13e-01	3.02e-01	5.25e-01
[43.9,72.3)	31	22	70.97	8.967e-01	5.016e-01	1.603	7.130e-01	1.05	7.661e-01	2.370			
≥ 72.3	34	30	88.24	1.356	7.860e-01	2.341	2.735e-01	0.70	4.349e-01	1.007			
Profile Likelihood													
< 64.8	57	39	68.42	----	----	----	----	1.05	8.236e-01	1.697	1.24e-01	1.20e-01	2.48e-01
≥ 64.8	42	37	88.10	1.434	9.086e-01	2.262	1.216e-01	0.77	5.285e-01	1.007			
Quantitative													
	99	76	76.77	1.002	0.998	1.007	2.856e-01				3.014e-01	2.851e-01	

Cohort: Validation

Outcome: Progression Free Survival by DLCO (Lung Transplant counts as event)

Predictor: Age (years)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 61.6	19	13	68.42	----	----	----	----	1.61	7.661e-01		5.09e-02	4.50e-02	2.11e-02
[61.6,66.5)	20	18	90.00	3.084	1.467	6.483	2.961e-03	0.55	3.993e-01	1.180			
[66.5,70.1)	20	18	90.00	1.777	8.579e-01	3.680	1.218e-01	0.83	3.993e-01	2.045			
[70.1,77.1)	20	17	85.00	1.610	7.693e-01	3.369	2.063e-01	1.02	7.990e-01				
≥ 77.1	20	18	90.00	2.018	9.586e-01	4.249	6.450e-02	0.90	7.934e-01	1.552			
Quartiles													
< 62.8	24	16	66.67	----	----	----	----	0.95	7.660e-01		3.39e-02	2.56e-02	3.98e-02
[62.8,68.4)	25	24	96.00	2.607	1.357	5.009	4.025e-03	0.55	3.993e-01	8.620e-01			
[68.4,75)	25	22	88.00	1.520	7.873e-01	2.934	2.123e-01	0.98	6.895e-01	1.130			
≥ 75	25	22	88.00	1.474	7.621e-01	2.851	2.490e-01	1.02	8.235e-01	1.514			
Tertiles													
< 65.3	33	25	75.76	----	----	----	----	0.77	5.935e-01	2.094	4.06e-01	4.07e-01	4.92e-01
[65.3,72.8)	33	30	90.91	1.446	8.419e-01	2.482	1.815e-01	0.82	4.759e-01	1.081			
≥ 72.8	33	29	87.88	1.231	7.152e-01	2.120	4.527e-01	0.90	7.990e-01	1.511			
Profile Likelihood													
<62.6	23	15	65.22	----	----	----	----	1.61	7.660e-01		2.07e-02	2.71e-02	3.91e-03
≥62.6	76	69	90.79	1.887	1.065	3.343	2.947e-02	0.82	6.895e-01	1.007			
Quantitative													
	99	84	84.85	1.008	9.839e-01	1.033	5.172e-01				5.137e-01	5.172e-01	
Predictor: Gender													
Female	34	26	76.47	----	----	----	----	1.13	0.793	2.33			
Male	65	58	89.23	1.63	1.019	2.611	4.16E-02	0.80	0.665	0.95	3.66E-02	3.94E-02	

Cohort: Validation
Outcome: Progression Free Survival by DLCO (Lung Transplant counts as event)
Predictor: Baseline (4-month) FVC % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 48.7	18	16	88.89	----	----	----	----	0.79	5.258e-01	2.335	1.81e-01	1.91e-01	4.53e-01
[48.7,54.9)	16	16	100.00	1.075	5.360e-01	2.155	8.390e-01	0.77	4.513e-01	2.094			
[54.9,62)	17	16	94.12	1.442	7.093e-01	2.930	3.121e-01	0.77	4.787e-01	1.117			
[62,77.2)	17	14	82.35	9.014e-01	4.351e-01	1.868	7.801e-01	0.86	5.285e-01				
≥ 77.2	18	13	72.22	5.709e-01	2.685e-01	1.214	1.454e-01	1.08	8.127e-01				
Quartiles													
< 49.7	21	19	90.48	----	----	----	----	0.95	5.258e-01	1.563	8.57e-02	9.41e-02	2.54e-01
[49.7,58.2)	22	22	100.00	1.378	7.425e-01	2.558	3.094e-01	0.69	4.787e-01	9.358e-01			
[58.2,72.6)	22	18	81.82	1.088	5.653e-01	2.095	8.004e-01	0.77	3.993e-01	1.398			
≥ 72.6	21	16	76.19	6.004e-01	3.038e-01	1.186	1.420e-01	1.47	8.346e-01				
Tertiles													
< 51.8	28	26	92.86	----	----	----	----	0.79	5.258e-01	1.415	7.76e-03	7.39e-03	2.50e-02
[51.8,67.6)	30	28	93.33	1.517	8.739e-01	2.632	1.387e-01	0.73	5.285e-01	9.030e-01			
≥ 67.6	28	21	75.00	5.961e-01	3.293e-01	1.079	8.764e-02	1.40	8.346e-01	2.198			
Profile Likelihood													
< 69.0	59	55	93.22	----	----	----	----	0.77	5.471e-01	9.358e-01	3.18e-03	4.25e-03	2.94e-03
≥ 69.0	27	20	74.07	4.655e-01	2.722e-01	7.960e-01	5.217e-03	1.47	8.346e-01	2.198			
Quantitative													
	86	75	87.21	9.898e-01	9.775e-01	1.002	1.093e-01				1.069e-01	1.084e-01	

Cohort: Validation

Outcome: Progression Free Survival by DLCO (Lung Transplant counts as event)

Predictor: Baseline (4-month) DLco % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 30.1	17	17	100.00	----	----	----	----	0.34	3.062e-01	1.117	8.02e-02	4.22e-02	2.61e-01
[30.1,38.8)	15	14	93.33	4.996e-01	2.433e-01	1.026	5.879e-02	0.83	5.258e-01	2.094			
[38.8,46)	16	13	81.25	4.242e-01	2.039e-01	8.824e-01	2.175e-02	0.95	7.660e-01				
[46,62.2)	16	12	75.00	3.564e-01	1.684e-01	7.545e-01	7.013e-03	0.98	7.661e-01				
≥ 62.2	17	14	82.35	4.649e-01	2.241e-01	9.644e-01	3.965e-02	0.90	5.800e-01				
Quartiles													
< 31.7	21	20	95.24	----	----	----	----	0.59	3.068e-01	1.180	1.97e-01	1.98e-01	2.61e-01
[31.7,43.7)	19	17	89.47	9.817e-01	5.107e-01	1.887	9.558e-01	0.82	5.258e-01	1.415			
[43.7,56.5)	20	16	80.00	5.370e-01	2.771e-01	1.041	6.549e-02	1.40	7.661e-01				
≥ 56.5	21	17	80.95	6.829e-01	3.503e-01	1.331	2.629e-01	0.90	5.800e-01				
Tertiles													
< 34.6	27	26	96.30	----	----	----	----	0.59	3.226e-01	1.117	1.12e-01	9.69e-02	5.58e-01
[34.6,47.8)	27	24	88.89	6.289e-01	3.599e-01	1.099	1.035e-01	0.94	7.661e-01	1.609			
≥ 47.8	27	20	74.07	5.495e-01	3.028e-01	9.973e-01	4.898e-02	0.90	6.895e-01	1.552			
Profile Likelihood													
< 30.1	17	17	100.00	----	----	----	----	0.34	3.062e-01	1.117	6.15e-03	2.43e-03	3.99e-02
≥ 30.1	64	53	82.81	4.327e-01	2.478e-01	7.557e-01	3.230e-03	0.94	8.127e-01	1.415			
Quantitative	81	70	86.42	9.876e-01	9.740e-01	1.001	7.633e-02				6.645e-02	7.543e-02	

Cohort: Validation
Outcome: Progression Free Survival by DLCO (Lung Transplant counts as event)
Predictor: Baseline (4-month) CPI

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 41.2	17	13	76.47	----	----	----	----	1.08	8.127e-01		5.59e-01	5.42e-01	6.95e-01
[41.2,50.9)	15	12	80.00	1.060	4.725e-01	2.376	8.883e-01	0.92	7.995e-01				
[50.9,59.1)	17	15	88.24	1.326	6.196e-01	2.836	4.677e-01	0.77	6.647e-01				
[59.1,65.3)	16	15	93.75	1.433	6.654e-01	3.084	3.582e-01	0.82	5.258e-01	2.094			
≥ 65.3	16	15	93.75	1.809	8.407e-01	3.892	1.295e-01	0.39	3.062e-01	1.180			
Quartiles													
< 44.4	21	15	71.43	----	----	----	----	1.08	5.800e-01		2.31e-01	2.31e-01	9.49e-01
[44.4,55.5)	19	16	84.21	1.192	5.810e-01	2.445	6.320e-01	0.85	7.995e-01	1.913			
[55.5,64.1)	21	20	95.24	1.716	8.624e-01	3.416	1.240e-01	0.77	5.285e-01	1.398			
≥ 64.1	20	19	95.00	1.860	9.276e-01	3.730	8.041e-02	0.43	3.068e-01	1.180			
Tertiles													
< 49.9	27	20	74.07	----	----	----	----	1.08	8.127e-01	2.198	9.89e-02	9.18e-02	8.26e-01
[49.9,60.6)	27	24	88.89	1.332	7.283e-01	2.437	3.518e-01	0.82	7.251e-01	1.609			
≥ 60.6	27	26	96.30	1.909	1.053	3.460	3.322e-02	0.59	3.363e-01	1.117			
Profile Likelihood													
<59.8	52	42	80.77	----	----	----	----	0.90	7.995e-01	1.511	2.64e-02	2.13e-02	3.25e-01
≥59.8	29	28	96.55	1.753	1.080	2.847	2.325e-02	0.59	3.471e-01	1.007			
Quantitative	81	70	86.42	1.020	1.001	1.039	3.895e-02				3.251e-02	3.802e-02	

Cohort: Validation
Outcome: Progression Free Survival by DLCO (Lung Transplant counts as event)
Predictor: Baseline (3-month) FVC % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 48.9	15	13	86.67	----	----	----	----	0.79	5.258e-01		3.62e-01	3.76e-01	6.86e-01
[48.9,55.7)	14	14	100.00	1.049	4.909e-01	2.242	9.016e-01	0.77	4.759e-01	2.094			
[55.7,62)	13	12	92.31	1.240	5.589e-01	2.749	5.971e-01	0.82	3.993e-01				
[62,76.7)	16	13	81.25	7.796e-01	3.575e-01	1.700	5.315e-01	1.13	7.251e-01				
≥ 76.7	15	12	80.00	5.688e-01	2.531e-01	1.278	1.719e-01	1.08	7.995e-01				
Quartiles													
< 49.7	18	16	88.89	----	----	----	----	0.95	5.935e-01	1.609	6.57e-02	5.26e-02	1.72e-01
[49.7,58.8)	18	18	100.00	1.773	8.907e-01	3.527	1.030e-01	0.73	4.349e-01	9.358e-01			
[58.8,73.3)	19	15	78.95	1.037	5.072e-01	2.122	9.199e-01	0.77	3.993e-01				
≥ 73.3	18	15	83.33	6.666e-01	3.241e-01	1.371	2.703e-01	1.47	8.127e-01	2.198			
Tertiles													
< 51.8	24	22	91.67	----	----	----	----	0.79	5.258e-01	1.563	7.31e-03	6.37e-03	2.06e-02
[51.8,68.1)	25	23	92.00	1.670	9.015e-01	3.094	1.030e-01	0.73	4.759e-01	9.358e-01			
≥ 68.1	24	19	79.17	5.910e-01	3.133e-01	1.115	1.044e-01	1.47	8.127e-01	2.198			
Profile Likelihood													
< 68.3	49	45	91.84	----	----	----	----	0.77	5.285e-01	9.495e-01	7.41e-03	8.94e-03	9.20e-03
≥ 68.3	24	19	79.17	4.786e-01	2.723e-01	8.414e-01	1.047e-02	1.47	8.127e-01	2.198			
Quantitative													
	73	64	87.67	9.900e-01	9.769e-01	1.003	1.373e-01				1.361e-01	1.363e-01	

Cohort: Validation
Outcome: Progression Free Survival by DLCO (Lung Transplant counts as event)
Predictor: Baseline (3-month) DLco % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 28.6	14	14	100.00	----	----	----	----	0.32	2.843e-01	1.180	1.31e-01	8.91e-02	3.67e-01
[28.6,38.3)	13	12	92.31	6.149e-01	2.808e-01	1.347	2.241e-01	0.77	3.637e-01				
[38.3,46)	13	10	76.92	3.768e-01	1.652e-01	8.594e-01	2.034e-02	1.40	9.358e-01				
[46,61.3)	14	11	78.57	3.985e-01	1.789e-01	8.877e-01	2.434e-02	0.98	7.661e-01				
≥ 61.3	14	12	85.71	4.794e-01	2.153e-01	1.067	7.185e-02	0.86	5.800e-01				
Quartiles													
< 30.9	18	17	94.44	----	----	----	----	0.51	3.062e-01	1.180	4.70e-01	4.48e-01	4.75e-01
[30.9,43.8)	16	14	87.50	7.453e-01	3.653e-01	1.520	4.190e-01	0.94	5.258e-01				
[43.8,55.1)	16	13	81.25	5.743e-01	2.779e-01	1.187	1.344e-01	1.40	7.661e-01				
≥ 55.1	18	15	83.33	6.450e-01	3.151e-01	1.320	2.302e-01	0.86	6.265e-01				
Tertiles													
< 33.8	22	21	95.45	----	----	----	----	0.43	3.068e-01	1.127	2.48e-01	2.29e-01	8.03e-01
[33.8,47.4)	24	21	87.50	6.700e-01	3.642e-01	1.233	1.978e-01	0.95	7.661e-01	1.609			
≥ 47.4	22	17	77.27	5.872e-01	3.042e-01	1.133	1.125e-01	1.08	6.895e-01	1.552			
Profile Likelihood													
< 30.1	16	16	100.00	----	----	----	----	0.39	2.843e-01	1.127	9.46e-03	4.47e-03	5.23e-02
≥ 30.1	52	43	82.69	4.364e-01	2.426e-01	7.852e-01	5.656e-03	0.98	8.235e-01	1.511			
Quantitative	68	59	86.76	9.873e-01	9.726e-01	1.002	9.466e-02				8.355e-02	9.374e-02	

Cohort: Validation

Outcome: Progression Free Survival by DLCO (Lung Transplant counts as event)

Predictor: Baseline (3-month) CPI

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 42.9	14	12	85.71	----	----	----	----	0.86	5.800e-01		1.83e-01	1.50e-01	5.68e-02
[42.9,51.7)	13	10	76.92	8.040e-01	3.363e-01	1.922	6.238e-01	1.51	8.236e-01				
[51.7,59.8)	14	11	78.57	7.758e-01	3.344e-01	1.800	5.545e-01	1.40	7.251e-01				
[59.8,66)	14	14	100.00	1.838	8.226e-01	4.109	1.378e-01	0.68	3.637e-01	1.563			
≥ 66	13	12	92.31	1.381	6.022e-01	3.167	4.460e-01	0.43	2.843e-01				
Quartiles													
< 45.4	18	14	77.78	----	----	----	----	1.13	8.127e-01		1.80e-01	1.72e-01	8.24e-01
[45.4,56)	16	13	81.25	1.252	5.791e-01	2.707	5.678e-01	0.98	7.661e-01				
[56,64.8)	17	16	94.12	1.721	8.220e-01	3.601	1.499e-01	0.82	5.285e-01	1.927			
≥ 64.8	17	16	94.12	2.159	1.032	4.518	4.112e-02	0.43	3.062e-01	1.127			
Tertiles													
< 50.3	22	17	77.27	----	----	----	----	1.47	8.236e-01	2.198	8.69e-02	8.11e-02	6.33e-01
[50.3,62.2)	24	21	87.50	1.432	7.458e-01	2.750	2.806e-01	0.85	7.251e-01	1.563			
≥ 62.2	22	21	95.45	2.087	1.083	4.022	2.798e-02	0.53	3.068e-01	1.117			
Profile Likelihood													
<59.8	41	33	80.49	----	----	----	----	1.08	8.127e-01	1.552	2.10e-02	1.71e-02	2.16e-01
≥59.8	27	26	96.30	1.873	1.109	3.164	1.894e-02	0.59	3.471e-01	1.007			
Quantitative	68	59	86.76	1.020	9.996e-01	1.041	5.430e-02				4.590e-02	5.315e-02	

Cohort: Validation

Outcome: Progression Free Survival by DLCO (Lung Transplant counts as event)

Predictor: MMP7Elisa (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 3.41	19	15	78.95	----	----	----	----	0.80	6.265e-01		9.24e-01	9.27e-01	8.38e-01
[3.41,4.56)	19	15	78.95	7.680e-01	3.675e-01	1.605	4.827e-01	1.05	6.895e-01				
[4.56,5.49)	20	18	90.00	9.346e-01	4.619e-01	1.891	8.509e-01	0.98	5.258e-01	2.198			
[5.49,7.52)	20	17	85.00	1.006	4.908e-01	2.061	9.873e-01	0.79	4.759e-01	1.609			
≥ 7.52	21	19	90.48	1.021	5.075e-01	2.053	9.539e-01	0.95	4.787e-01	1.552			
Quartiles													
< 3.54	24	18	75.00	----	----	----	----	0.85	7.990e-01		4.84e-01	4.87e-01	2.06e-01
[3.54,4.94)	24	20	83.33	1.496	7.773e-01	2.880	2.279e-01	0.90	6.790e-01	1.127			
[4.94,6.46)	25	22	88.00	1.149	6.077e-01	2.173	6.687e-01	0.99	5.258e-01	2.094			
≥ 6.46	26	24	92.31	1.520	8.138e-01	2.841	1.889e-01	0.82	4.787e-01	1.415			
Tertiles													
< 3.99	33	25	75.76	----	----	----	----	0.85	7.661e-01	1.511	5.74e-01	5.80e-01	4.15e-01
[3.99,5.91)	32	30	93.75	1.291	7.539e-01	2.212	3.516e-01	0.90	6.647e-01	1.398			
≥ 5.91	34	29	85.29	1.281	7.438e-01	2.207	3.717e-01	0.82	4.787e-01	1.470			
Profile Likelihood													
< 3.5	26	20	76.92	----	----	----	----	0.85	7.990e-01	2.335	2.10e-01	2.20e-01	1.54e-01
≥ 3.5	73	64	87.67	1.377	8.234e-01	2.304	2.226e-01	0.83	6.895e-01	1.117			
Quantitative													
	99	84	84.85	1.001	9.433e-01	1.062	9.723e-01				9.723e-01	9.723e-01	

Cohort: Validation
Outcome: Progression Free Survival by DLCO (Lung Transplant counts as event)
Predictor: ICAM (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 226	20	15	75.00	----	----	----	----	0.86	7.990e-01		9.95e-02	5.39e-02	7.40e-02
[226,281)	20	18	90.00	1.090	5.412e-01	2.197	8.088e-01	0.94	8.236e-01	2.198			
[281,326)	18	13	72.22	1.071	4.964e-01	2.309	8.620e-01	0.77	4.513e-01				
[326,419)	20	19	95.00	2.401	1.184	4.871	1.519e-02	0.53	3.993e-01	1.322			
≥ 419	21	19	90.48	1.145	5.688e-01	2.303	7.051e-01	1.19	6.790e-01	2.094			
Quartiles													
< 238	25	19	76.00	----	----	----	----	0.86	7.990e-01	1.398	2.16e-01	1.88e-01	1.74e-01
[238,303)	24	19	79.17	9.831e-01	5.150e-01	1.877	9.588e-01	1.02	8.127e-01	2.198			
[303,387)	24	22	91.67	1.790	9.517e-01	3.365	7.086e-02	0.55	4.349e-01	1.322			
≥ 387	26	24	92.31	1.261	6.800e-01	2.338	4.619e-01	0.95	5.935e-01	1.563			
Tertiles													
< 258	34	27	79.41	----	----	----	----	1.01	8.127e-01	1.398	2.05e-01	2.16e-01	2.47e-01
[258,367)	31	25	80.65	1.531	8.728e-01	2.686	1.374e-01	0.77	5.471e-01	1.322			
≥ 367	34	32	94.12	1.521	8.974e-01	2.577	1.193e-01	0.79	5.285e-01	1.511			
Profile Likelihood													
<291.7	45	35	77.78	----	----	----	----	0.98	8.236e-01	1.180	3.12e-02	3.14e-02	2.12e-02
≥291.7	54	49	90.74	1.622	1.039	2.531	3.313e-02	0.68	5.285e-01	9.879e-01			
Quantitative	99	84	84.85	1.001	0.999	1.003	3.187e-01				3.222e-01	3.182e-01	

Cohort: **Validation**

Outcome: **Progression Free Survival by DLCO (Lung Transplant counts as event)**

Predictor: **IL8 (ng / mL)**

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 0.00767	19	15	78.95	----	----	----	----	0.98	6.895e-01		2.25e-01	2.16e-01	2.75e-01
[0.00767,0.0101)	20	17	85.00	1.793	8.243e-01	3.898	1.409e-01	0.82	7.661e-01	2.370			
[0.0101,0.0131)	18	14	77.78	2.194	1.060	4.542	3.429e-02	0.55	4.513e-01				
[0.0131,0.0178)	20	19	95.00	1.544	7.381e-01	3.232	2.486e-01	0.80	5.285e-01	1.415			
≥ 0.0178	20	17	85.00	1.217	5.869e-01	2.525	5.972e-01	0.98	7.661e-01	1.552			
Quartiles													
< 0.00825	24	20	83.33	----	----	----	----	0.86	6.895e-01	4.055	1.73e-01	1.50e-01	2.18e-01
[0.00825,0.0112)	24	19	79.17	2.061	1.080	3.934	2.831e-02	0.81	5.800e-01	2.045			
[0.0112,0.0164)	24	22	91.67	1.348	7.040e-01	2.580	3.678e-01	0.58	4.513e-01	9.495e-01			
≥ 0.0164	25	21	84.00	1.299	6.695e-01	2.521	4.391e-01	0.99	9.030e-01	1.514			
Tertiles													
< 0.00959	32	25	78.12	----	----	----	----	0.86	7.661e-01	2.198	1.22e-01	1.33e-01	1.37e-01
[0.00959,0.015)	32	28	87.50	1.685	9.587e-01	2.960	6.980e-02	0.73	5.285e-01	1.180			
≥ 0.015	33	29	87.88	1.632	9.273e-01	2.872	8.945e-02	0.94	7.661e-01	1.415			
Profile Likelihood													
< 0.0093	29	22	75.86	----	----	----	----	1.01	7.661e-01		1.20e-02	1.50e-02	1.37e-02
≥ 0.0093	68	60	88.24	1.901	1.123	3.217	1.675e-02	0.82	6.647e-01	1.015			
Quantitative*	97	82	84.54	1.011	9.865e-01	1.037	3.740e-01				4.024e-01	3.767e-01	

*Units of pg / mL were used in **Quantitative model only**.

Cohort: Validation
Outcome: Progression Free Survival by DLCO (Lung Transplant counts as event)
Predictor: VCAM (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 222	20	16	80.00	----	----	----	----	0.82	5.285e-01		1.25e-01	1.07e-01	1.06e-01
[222,260)	20	18	90.00	1.906	9.432e-01	3.853	7.233e-02	0.80	4.349e-01	9.768e-01			
[260,310)	19	14	73.68	9.724e-01	4.666e-01	2.027	9.405e-01	1.02	7.660e-01				
[310,376)	20	17	85.00	9.107e-01	4.534e-01	1.830	7.927e-01	1.51	7.251e-01	2.094			
≥ 376	20	19	95.00	1.643	8.244e-01	3.276	1.582e-01	0.68	5.202e-01	1.563			
Quartiles													
< 230	25	21	84.00	----	----	----	----	0.82	4.513e-01	2.198	4.34e-01	4.36e-01	4.30e-01
[230,285)	24	21	87.50	1.377	7.298e-01	2.599	3.232e-01	0.90	7.990e-01	1.117			
[285,358)	25	19	76.00	8.218e-01	4.363e-01	1.548	5.436e-01	1.18	6.647e-01	2.094			
≥ 358	25	23	92.00	1.156	6.336e-01	2.108	6.372e-01	0.77	5.202e-01	1.563			
Tertiles													
< 246	34	29	85.29	----	----	----	----	0.79	4.513e-01	1.007	6.97e-01	6.98e-01	5.24e-01
[246,334)	32	25	78.12	7.910e-01	4.595e-01	1.362	3.976e-01	0.99	8.620e-01	1.398			
≥ 334	33	30	90.91	9.049e-01	5.390e-01	1.519	7.052e-01	0.81	5.935e-01	1.514			
Profile Likelihood													
<365.7	78	64	82.05	----	----	----	----	0.90	7.990e-01	1.127	9.82e-02	8.38e-02	3.68e-02
≥365.7	21	20	95.24	1.563	9.391e-01	2.600	8.576e-02	0.68	4.787e-01	1.470			
Quantitative	99	84	84.85	1.000	0.9984	1.002	7.682e-01				7.702e-01	7.682e-01	

Cohort: **Validation**

Outcome: **Progression Free Survival by DLCO (Lung Transplant counts as event)**

Predictor: **S100A12 (ng / mL)**

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 36.6	20	16	80.00	----	----	----	----	0.86	6.647e-01	1.470	2.54e-01	2.12e-01	2.48e-01
[36.6,49.2)	19	15	78.95	7.504e-01	3.720e-01	1.514	4.224e-01	0.95	6.265e-01				
[49.2,65.9)	19	15	78.95	7.352e-01	3.612e-01	1.496	3.961e-01	0.94	7.661e-01	2.370			
[65.9,105)	20	19	95.00	6.668e-01	3.237e-01	1.373	2.716e-01	0.77	4.321e-01	1.180			
≥ 105	21	19	90.48	1.356	6.938e-01	2.650	3.731e-01	0.98	4.349e-01	1.927			
Quartiles													
< 39.7	25	21	84.00	----	----	----	----	0.86	6.647e-01	1.470	9.30e-01	9.33e-01	9.20e-01
[39.7,54.5)	24	19	79.17	8.371e-01	4.489e-01	1.561	5.761e-01	0.95	6.895e-01				
[54.5,82.8)	24	20	83.33	1.013	5.473e-01	1.877	9.660e-01	0.80	4.759e-01	1.511			
≥ 82.8	26	24	92.31	9.479e-01	5.191e-01	1.731	8.617e-01	0.79	5.935e-01	1.552			
Tertiles													
< 43.9	34	27	79.41	----	----	----	----	0.95	7.251e-01	1.415	5.39e-01	5.36e-01	1.96e-01
[43.9,72.3)	31	25	80.65	8.777e-01	5.048e-01	1.526	6.438e-01	0.83	7.661e-01	1.913			
≥ 72.3	34	32	94.12	1.185	7.013e-01	2.002	5.258e-01	0.77	4.349e-01	1.180			
Profile Likelihood													
< 65.7	58	46	79.31	----	----	----	----	0.94	7.990e-01	1.322	2.95e-01	2.91e-01	9.61e-02
≥ 65.7	41	38	92.68	1.266	8.167e-01	1.962	2.918e-01	0.77	4.513e-01	1.007			
Quantitative	99	84	84.85	0.9998	0.9957	1.004	9.229e-01				9.226e-01	9.229e-01	

Cohort: Validation

Outcome: Progression Free Survival by CPI (Lung Transplant counts as event)

Predictor: Age (years)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 61.6	19	14	73.68	----	----	----	----	0.73	4.594e-01		1.25e-01	8.64e-02	6.26e-02
[61.6,66.5)	20	20	100.00	2.510	1.237	5.095	1.083e-02	0.49	3.445e-01	8.236e-01			
[66.5,70.1)	20	18	90.00	1.264	6.193e-01	2.581	5.195e-01	0.65	5.202e-01	2.045			
[70.1,77.1)	20	19	95.00	1.371	6.765e-01	2.777	3.816e-01	0.98	6.895e-01	1.130			
≥ 77.1	20	18	90.00	1.428	6.910e-01	2.952	3.360e-01	0.85	7.251e-01	1.552			
Quartiles													
< 62.8	24	19	79.17	----	----	----	----	0.61	4.513e-01	2.299	3.32e-01	2.90e-01	3.32e-01
[62.8,68.4)	25	24	96.00	1.616	8.702e-01	3.001	1.285e-01	0.55	3.993e-01	8.236e-01			
[68.4,75)	25	23	92.00	9.868e-01	5.300e-01	1.838	9.667e-01	0.98	6.895e-01	1.127			
≥ 75	25	23	92.00	1.069	5.732e-01	1.994	8.333e-01	0.90	7.934e-01	1.415			
Tertiles													
< 65.3	33	28	84.85	----	----	----	----	0.59	4.594e-01	1.180	9.32e-01	9.34e-01	9.27e-01
[65.3,72.8)	33	31	93.94	1.078	6.406e-01	1.815	7.763e-01	0.80	5.202e-01	1.007			
≥ 72.8	33	30	90.91	9.843e-01	5.831e-01	1.661	9.527e-01	0.85	7.251e-01	1.117			
Profile Likelihood													
<68.0	47	42	89.36	----	----	----	----	0.55	4.594e-01	7.661e-01	9.64e-02	9.08e-02	8.21e-03
≥68.0	52	47	90.38	6.961e-01	4.552e-01	1.065	9.471e-02	0.98	8.235e-01	1.081			
Quantitative													
	99	89	89.90	9.987e-01	9.759e-01	1.022	9.156e-01				9.158e-01	9.156e-01	
Predictor: Gender													
Female	34	30	88.24	----	----	----	----	0.98	0.793	1.42			
Male	65	59	90.77	1.51	0.965	2.354	7.17E-02	0.63	0.547	0.82	6.67E-02	6.88E-02	

Cohort: Validation

Outcome: Progression Free Survival by CPI (Lung Transplant counts as event)

Predictor: Baseline (4-month) FVC % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 48.7	18	16	88.89	----	----	----	----	0.63	3.444e-01	2.335	6.76e-01	6.69e-01	5.42e-01
[48.7,54.9)	16	16	100.00	1.152	5.737e-01	2.315	6.902e-01	0.55	4.513e-01	2.094			
[54.9,62)	17	17	100.00	1.485	7.359e-01	2.998	2.695e-01	0.77	4.787e-01	9.386e-01			
[62,77.2)	17	16	94.12	1.218	6.034e-01	2.457	5.826e-01	0.73	5.307e-01	1.470			
≥ 77.2	18	15	83.33	8.856e-01	4.290e-01	1.828	7.425e-01	0.80	5.800e-01				
Quartiles													
< 49.7	21	19	90.48	----	----	----	----	0.79	4.431e-01	1.563	2.43e-01	2.43e-01	1.16e-01
[49.7,58.2)	22	22	100.00	1.436	7.708e-01	2.677	2.542e-01	0.55	4.759e-01	9.030e-01			
[58.2,72.6)	22	21	95.45	1.488	7.919e-01	2.797	2.168e-01	0.65	5.285e-01	9.879e-01			
≥ 72.6	21	18	85.71	8.611e-01	4.454e-01	1.665	6.567e-01	0.85	6.238e-01	1.913			
Tertiles													
< 51.8	28	26	92.86	----	----	----	----	0.63	4.431e-01	1.180	1.52e-01	1.36e-01	9.27e-02
[51.8,67.6)	30	29	96.67	1.517	8.787e-01	2.620	1.347e-01	0.55	4.787e-01	9.030e-01			
≥ 67.6	28	25	89.29	9.062e-01	5.177e-01	1.586	7.302e-01	0.83	6.238e-01	1.081			
Profile Likelihood													
< 71.9	64	61	95.31	----	----	----	----	0.63	4.950e-01	8.538e-01	1.32e-01	1.41e-01	1.68e-02
≥ 71.9	22	19	86.36	6.755e-01	3.984e-01	1.145	1.452e-01	0.85	6.238e-01	1.913			
Quantitative													
	86	80	93.02	9.992e-01	9.868e-01	1.012	8.988e-01				8.988e-01	8.988e-01	

Cohort: Validation

Outcome: Progression Free Survival by CPI (Lung Transplant counts as event)

Predictor: Baseline (4-month) DLco % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 30.1	17	17	100.00	----	----	----	----	0.43	3.062e-01	1.117	4.72e-01	4.30e-01	6.15e-01
[30.1,38.8)	15	14	93.33	5.681e-01	2.774e-01	1.164	1.222e-01	0.82	6.515e-01	2.094			
[38.8,46)	16	15	93.75	7.255e-01	3.586e-01	1.468	3.720e-01	0.73	4.950e-01	1.563			
[46,62.2)	16	14	87.50	5.411e-01	2.646e-01	1.106	9.238e-02	0.85	6.265e-01				
≥ 62.2	17	15	88.24	6.373e-01	3.136e-01	1.295	2.131e-01	0.58	5.307e-01	1.552			
Quartiles													
< 31.7	21	20	95.24	----	----	----	----	0.59	3.068e-01	1.127	5.82e-01	5.79e-01	5.36e-01
[31.7,43.7)	19	19	100.00	1.094	5.806e-01	2.062	7.807e-01	0.65	4.513e-01	1.185			
[43.7,56.5)	20	17	85.00	7.105e-01	3.705e-01	1.363	3.037e-01	0.85	6.265e-01	2.198			
≥ 56.5	21	19	90.48	8.546e-01	4.503e-01	1.622	6.309e-01	0.82	5.471e-01	1.130			
Tertiles													
< 34.6	27	26	96.30	----	----	----	----	0.65	3.226e-01	1.007	6.64e-01	6.53e-01	7.93e-01
[34.6,47.8)	27	26	96.30	8.083e-01	4.677e-01	1.397	4.458e-01	0.82	6.046e-01	1.185			
≥ 47.8	27	23	85.19	7.906e-01	4.468e-01	1.399	4.197e-01	0.69	5.608e-01	1.081			
Profile Likelihood													
< 30.4	18	18	100.00	----	----	----	----	0.45	3.062e-01	1.117	8.41e-02	6.79e-02	1.72e-01
≥ 30.4	63	57	90.48	6.097e-01	3.561e-01	1.044	7.123e-02	0.82	6.238e-01	9.768e-01			
Quantitative	81	75	92.59	9.933e-01	9.809e-01	1.006	2.976e-01				2.894e-01	2.969e-01	

Cohort: Validation
Outcome: Progression Free Survival by CPI (Lung Transplant counts as event)
Predictor: Baseline (4-month) CPI

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 41.2	17	14	82.35	----	----	----	----	0.90	5.553e-01		6.47e-01	6.32e-01	7.12e-01
[41.2,50.9)	15	14	93.33	1.233	5.752e-01	2.641	5.908e-01	0.84	6.265e-01	1.913			
[50.9,59.1)	17	17	100.00	1.746	8.401e-01	3.628	1.354e-01	0.69	4.950e-01	9.768e-01			
[59.1,65.3)	16	15	93.75	1.162	5.492e-01	2.457	6.950e-01	0.77	4.431e-01	2.094			
≥ 65.3	16	15	93.75	1.340	6.353e-01	2.826	4.421e-01	0.45	3.062e-01	1.180			
Quartiles													
< 44.4	21	18	85.71	----	----	----	----	0.85	5.471e-01	1.130	9.26e-01	9.26e-01	6.98e-01
[44.4,55.5)	19	18	94.74	1.128	5.780e-01	2.201	7.243e-01	0.82	6.238e-01	1.552			
[55.5,64.1)	21	20	95.24	1.251	6.524e-01	2.400	4.999e-01	0.73	4.950e-01	9.768e-01			
≥ 64.1	20	19	95.00	1.156	5.980e-01	2.235	6.665e-01	0.47	3.068e-01	1.180			
Tertiles													
< 49.9	27	23	85.19	----	----	----	----	0.82	5.608e-01	1.130	6.29e-01	6.35e-01	9.70e-01
[49.9,60.6)	27	26	96.30	1.232	6.957e-01	2.180	4.748e-01	0.73	6.127e-01	9.768e-01			
≥ 60.6	27	26	96.30	1.304	7.373e-01	2.306	3.617e-01	0.59	3.444e-01	1.117			
Profile Likelihood													
<50.1	28	24	85.71	----	----	----	----	0.85	5.800e-01	1.470	2.36e-01	2.43e-01	4.97e-01
≥50.1	53	51	96.23	1.342	8.185e-01	2.199	2.438e-01	0.69	5.285e-01	9.358e-01			
Quantitative													
	81	75	92.59	1.008	9.915e-01	1.025	3.383e-01				3.317e-01	3.377e-01	

Cohort: Validation

Outcome: Progression Free Survival by CPI (Lung Transplant counts as event)

Predictor: Baseline (3-month) FVC % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 48.9	15	13	86.67	----	----	----	----	0.63	3.444e-01		9.49e-01	9.45e-01	7.12e-01
[48.9,55.7)	14	14	100.00	1.106	5.169e-01	2.368	7.945e-01	0.55	4.594e-01	2.094			
[55.7,62)	13	13	100.00	1.306	5.968e-01	2.857	5.042e-01	0.82	4.349e-01				
[62,76.7)	16	15	93.75	1.019	4.825e-01	2.151	9.610e-01	0.73	5.307e-01	1.470			
≥ 76.7	15	14	93.33	9.663e-01	4.454e-01	2.096	9.308e-01	0.73	5.608e-01	2.198			
Quartiles													
< 49.7	18	16	88.89	----	----	----	----	0.63	4.431e-01	2.094	4.66e-01	4.58e-01	2.22e-01
[49.7,58.8)	18	18	100.00	1.507	7.594e-01	2.990	2.409e-01	0.58	4.594e-01	9.358e-01			
[58.8,73.3)	19	18	94.74	1.332	6.755e-01	2.625	4.082e-01	0.65	3.993e-01	1.130			
≥ 73.3	18	17	94.44	9.377e-01	4.675e-01	1.881	8.564e-01	0.80	5.800e-01	1.470			
Tertiles													
< 51.8	24	22	91.67	----	----	----	----	0.63	4.431e-01	1.180	1.50e-01	1.30e-01	7.95e-02
[51.8,68.1)	25	24	96.00	1.640	8.951e-01	3.004	1.093e-01	0.53	4.710e-01	9.358e-01			
≥ 68.1	24	23	95.83	9.412e-01	5.197e-01	1.705	8.416e-01	0.80	6.046e-01	1.081			
Profile Likelihood													
< 68.3	49	46	93.88	----	----	----	----	0.63	4.759e-01	8.538e-01	2.69e-01	2.70e-01	2.85e-02
≥ 68.3	24	23	95.83	7.534e-01	4.526e-01	1.254	2.760e-01	0.80	6.046e-01	1.081			
Quantitative													
	73	69	94.52	1.001	9.875e-01	1.014	9.014e-01				9.014e-01	9.014e-01	

Cohort: Validation
Outcome: Progression Free Survival by CPI (Lung Transplant counts as event)
Predictor: Baseline (3-month) DLco % Predicted

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 28.6	14	14	100.00	----	----	----	----	0.37	2.843e-01	1.180	8.13e-01	7.89e-01	9.31e-01
[28.6,38.3)	13	12	92.31	7.263e-01	3.321e-01	1.588	4.231e-01	0.73	4.431e-01				
[38.3,46)	13	12	92.31	6.864e-01	3.137e-01	1.502	3.462e-01	0.94	5.285e-01				
[46,61.3)	14	13	92.86	6.319e-01	2.937e-01	1.360	2.404e-01	0.85	6.265e-01				
≥ 61.3	14	13	92.86	6.899e-01	3.181e-01	1.496	3.472e-01	0.56	5.307e-01				
Quartiles													
< 30.9	18	17	94.44	----	----	----	----	0.53	3.062e-01	1.127	9.00e-01	8.96e-01	8.60e-01
[30.9,43.8)	16	16	100.00	9.397e-01	4.716e-01	1.873	8.597e-01	0.74	3.637e-01	1.913			
[43.8,55.1)	16	14	87.50	7.836e-01	3.837e-01	1.600	5.032e-01	0.85	6.238e-01	2.198			
≥ 55.1	18	17	94.44	8.270e-01	4.165e-01	1.642	5.873e-01	0.63	5.553e-01	1.130			
Tertiles													
< 33.8	22	21	95.45	----	----	----	----	0.59	3.068e-01	1.117	8.97e-01	8.92e-01	4.78e-01
[33.8,47.4)	24	23	95.83	8.732e-01	4.815e-01	1.584	6.553e-01	0.82	5.285e-01	1.185			
≥ 47.4	22	20	90.91	8.951e-01	4.790e-01	1.673	7.283e-01	0.69	5.608e-01	1.081			
Profile Likelihood													
< 41.6	31	30	96.77	----	----	----	----	0.53	3.445e-01	9.879e-01	1.33e-01	1.26e-01	2.03e-01
≥ 41.6	37	34	91.89	6.820e-01	4.153e-01	1.120	1.305e-01	0.85	6.238e-01	1.015			
Quantitative													
	68	64	94.12	9.940e-01	9.808e-01	1.007	3.802e-01				3.733e-01	3.796e-01	

Cohort: Validation

Outcome: Progression Free Survival by CPI (Lung Transplant counts as event)

Predictor: Baseline (3-month) CPI

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 42.9	14	13	92.86	----	----	----	----	0.56	5.307e-01		8.14e-01	7.84e-01	6.80e-01
[42.9,51.7)	13	12	92.31	9.605e-01	4.264e-01	2.164	9.225e-01	0.85	6.265e-01				
[51.7,59.8)	14	13	92.86	9.899e-01	4.483e-01	2.186	9.799e-01	0.73	6.127e-01				
[59.8,66)	14	14	100.00	1.464	6.692e-01	3.203	3.399e-01	0.62	3.637e-01	1.563			
≥ 66	13	12	92.31	9.891e-01	4.422e-01	2.212	9.786e-01	0.47	2.843e-01				
Quartiles													
< 45.4	18	17	94.44	----	----	----	----	0.62	5.553e-01	1.130	9.63e-01	9.63e-01	9.88e-01
[45.4,56)	16	15	93.75	1.104	5.430e-01	2.245	7.844e-01	0.82	6.127e-01	1.552			
[56,64.8)	17	16	94.12	1.136	5.658e-01	2.282	7.195e-01	0.73	5.285e-01	1.563			
≥ 64.8	17	16	94.12	1.200	5.983e-01	2.406	6.077e-01	0.47	3.062e-01	1.127			
Tertiles													
< 50.3	22	20	90.91	----	----	----	----	0.85	5.608e-01	1.470	5.98e-01	6.10e-01	7.38e-01
[50.3,62.2)	24	23	95.83	1.315	7.128e-01	2.426	3.810e-01	0.69	6.046e-01	9.768e-01			
≥ 62.2	22	21	95.45	1.317	7.069e-01	2.455	3.855e-01	0.47	3.068e-01	1.117			
Profile Likelihood													
<50.1	22	20	90.91	----	----	----	----	0.85	5.608e-01	1.470	3.11e-01	3.20e-01	4.47e-01
≥50.1	46	44	95.65	1.316	7.670e-01	2.258	3.188e-01	0.65	5.285e-01	9.768e-01			
Quantitative													
	68	64	94.12	1.006	9.886e-01	1.024	4.868e-01				4.821e-01	4.865e-01	

Cohort: Validation
Outcome: Progression Free Survival by CPI (Lung Transplant counts as event)
Predictor: MMP7Elisa (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 3.41	19	17	89.47	----	----	----	----	0.63	5.307e-01	9.386e-01	4.62e-01	4.96e-01	4.96e-01
[3.41,4.56)	19	15	78.95	5.408e-01	2.647e-01	1.105	9.173e-02	1.00	6.895e-01				
[4.56,5.49)	20	19	95.00	8.274e-01	4.208e-01	1.627	5.827e-01	0.90	4.594e-01	2.045			
[5.49,7.52)	20	18	90.00	8.769e-01	4.437e-01	1.733	7.055e-01	0.61	4.759e-01	1.185			
≥ 7.52	21	20	95.24	8.680e-01	4.467e-01	1.687	6.763e-01	0.65	4.513e-01	1.415			
Quartiles													
< 3.54	24	20	83.33	----	----	----	----	0.82	6.046e-01	1.130	7.77e-01	7.76e-01	8.05e-01
[3.54,4.94)	24	21	87.50	1.251	6.685e-01	2.343	4.832e-01	0.77	5.935e-01	1.117			
[4.94,6.46)	25	23	92.00	1.159	6.273e-01	2.140	6.379e-01	0.61	4.759e-01	1.470			
≥ 6.46	26	25	96.15	1.362	7.483e-01	2.478	3.123e-01	0.69	4.710e-01	1.185			
Tertiles													
< 3.99	33	27	81.82	----	----	----	----	0.82	6.265e-01	1.015	4.89e-01	4.96e-01	5.40e-01
[3.99,5.91)	32	31	96.88	1.325	7.838e-01	2.240	2.935e-01	0.68	5.202e-01	1.015			
≥ 5.91	34	31	91.18	1.311	7.771e-01	2.211	3.103e-01	0.69	4.710e-01	1.180			
Profile Likelihood													
< 4.0	33	27	81.82	----	----	----	----	0.82	6.265e-01	1.015	2.32e-01	2.36e-01	2.70e-01
≥ 4.0	66	62	93.94	1.318	8.318e-01	2.088	2.398e-01	0.68	5.202e-01	9.768e-01			
Quantitative													
	99	89	89.90	1.016	9.563e-01	1.080	6.060e-01				6.124e-01	6.059e-01	

Cohort: Validation
Outcome: Progression Free Survival by CPI (Lung Transplant counts as event)
Predictor: ICAM (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 226	20	16	80.00	----	----	----	----	0.82	5.608e-01	1.081	1.03e-01	7.25e-02	6.36e-02
[226,281)	20	18	90.00	1.027	5.132e-01	2.055	9.399e-01	0.94	8.236e-01	2.198			
[281,326)	18	16	88.89	1.576	7.704e-01	3.222	2.130e-01	0.60	4.513e-01	9.386e-01			
[326,419)	20	19	95.00	2.256	1.127	4.514	2.156e-02	0.52	4.431e-01	9.879e-01			
≥ 419	21	20	95.24	1.115	5.666e-01	2.195	7.521e-01	0.77	5.285e-01	2.094			
Quartiles													
< 238	25	20	80.00	----	----	----	----	0.83	6.895e-01	1.081	3.17e-01	2.89e-01	2.22e-01
[238,303)	24	22	91.67	1.224	6.596e-01	2.273	5.211e-01	0.90	6.265e-01	1.130			
[303,387)	24	22	91.67	1.801	9.671e-01	3.353	6.368e-02	0.55	4.431e-01	8.538e-01			
≥ 387	26	25	96.15	1.247	6.840e-01	2.275	4.708e-01	0.72	4.759e-01	1.470			
Tertiles													
< 258	34	28	82.35	----	----	----	----	0.98	7.990e-01	1.130	7.70e-02	7.78e-02	3.07e-02
[258,367)	31	28	90.32	1.823	1.065	3.121	2.854e-02	0.63	5.471e-01	9.030e-01			
≥ 367	34	33	97.06	1.486	8.917e-01	2.477	1.285e-01	0.64	5.202e-01	1.015			
Profile Likelihood													
<258.3	34	28	82.35	----	----	----	----	0.98	7.990e-01	1.130	3.36e-02	3.63e-02	1.14e-02
≥258.3	65	61	93.85	1.620	1.026	2.559	3.858e-02	0.63	5.471e-01	8.538e-01			
Quantitative													
	99	89	89.90	1.001	0.9988	1.002	5.381e-01				5.401e-01	5.380e-01	

Cohort: **Validation**

Outcome: **Progression Free Survival by CPI (Lung Transplant counts as event)**

Predictor: **IL8 (ng / mL)**

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 0.00767	19	17	89.47	----	----	----	----	0.94	4.594e-01	2.198	2.35e-01	2.11e-01	2.48e-01
[0.00767,0.0101)	20	17	85.00	1.911	9.304e-01	3.927	7.780e-02	0.73	6.046e-01	2.370			
[0.0101,0.0131)	18	16	88.89	1.604	8.124e-01	3.165	1.735e-01	0.55	4.513e-01	1.081			
[0.0131,0.0178)	20	19	95.00	1.193	6.018e-01	2.365	6.134e-01	0.80	4.710e-01	1.130			
≥ 0.0178	20	18	90.00	9.436e-01	4.751e-01	1.874	8.683e-01	0.94	6.238e-01	1.470			
Quartiles													
< 0.00825	24	22	91.67	----	----	----	----	0.77	5.307e-01	1.322	3.15e-02	1.58e-02	3.39e-02
[0.00825,0.0112)	24	19	79.17	2.307	1.251	4.253	7.393e-03	0.73	5.471e-01	2.045			
[0.0112,0.0164)	24	24	100.00	1.120	6.063e-01	2.067	7.182e-01	0.50	4.513e-01	7.995e-01			
≥ 0.0164	25	22	88.00	1.076	5.707e-01	2.028	8.212e-01	0.98	7.661e-01	1.470			
Tertiles													
< 0.00959	32	27	84.38	----	----	----	----	0.82	6.046e-01	1.322	1.51e-01	1.56e-01	1.18e-01
[0.00959,0.015)	32	30	93.75	1.462	8.534e-01	2.504	1.668e-01	0.61	5.285e-01	8.538e-01			
≥ 0.015	33	30	90.91	1.666	9.720e-01	2.854	6.336e-02	0.82	6.238e-01	1.117			
Profile Likelihood													
< 0.0093	29	24	82.76	----	----	----	----	0.98	6.046e-01	2.198	2.28e-02	2.61e-02	1.12e-02
≥ 0.0093	68	63	92.65	1.740	1.060	2.856	2.842e-02	0.73	5.800e-01	8.538e-01			
Quantitative*	97	87	89.69	1.006	9.799e-01	1.032	6.684e-01				6.762e-01	6.689e-01	

*Units of pg / mL were used in **Quantitative model only**.

Cohort: Validation
Outcome: Progression Free Survival by CPI (Lung Transplant counts as event)
Predictor: VCAM (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLIN pvalue
Quintiles													
< 222	20	16	80.00	----	----	----	----	0.82	5.285e-01		1.40e-01	1.23e-01	1.96e-01
[222,260)	20	19	95.00	2.269	1.134	4.542	2.061e-02	0.56	4.349e-01	9.358e-01			
[260,310)	19	17	89.47	1.239	6.171e-01	2.489	5.464e-01	0.98	5.608e-01	1.117			
[310,376)	20	18	90.00	1.248	6.270e-01	2.485	5.280e-01	0.73	6.238e-01	2.045			
≥ 376	20	19	95.00	1.794	9.032e-01	3.565	9.505e-02	0.59	4.787e-01	1.470			
Quartiles													
< 230	25	21	84.00	----	----	----	----	0.80	4.513e-01	2.198	6.66e-01	6.77e-01	6.05e-01
[230,285)	24	22	91.67	1.476	7.904e-01	2.757	2.217e-01	0.85	5.553e-01	1.015			
[285,358)	25	23	92.00	1.206	6.613e-01	2.200	5.408e-01	0.69	6.046e-01	1.180			
≥ 358	25	23	92.00	1.280	7.019e-01	2.335	4.204e-01	0.68	4.787e-01	1.470			
Tertiles													
< 246	34	30	88.24	----	----	----	----	0.65	4.513e-01	8.538e-01	8.10e-01	8.08e-01	4.27e-01
[246,334)	32	28	87.50	8.808e-01	5.225e-01	1.485	6.339e-01	0.94	6.895e-01	1.081			
≥ 334	33	31	93.94	1.036	6.232e-01	1.722	8.914e-01	0.68	5.202e-01	1.180			
Profile Likelihood													
<222.6	21	17	80.95	----	----	----	----	0.82	4.513e-01		1.77e-01	1.93e-01	3.54e-01
≥222.6	78	72	92.31	1.437	8.324e-01	2.481	1.931e-01	0.73	6.046e-01	9.386e-01			
Quantitative	99	89	89.90	1.001	0.999	1.003	3.014e-01				3.118e-01	3.020e-01	

Cohort: Validation

Outcome: Progression Free Survival by CPI (Lung Transplant counts as event)

Predictor: S100A12 (ng / mL)

	Patients (N)	Events (n)	Events (%)	HR	HR 95% LCL	HR 95% UCL	Wald pvalue	Median (yrs.)	Median 95% LCL	Median 95% UCL	LR pvalue	Logrank pvalue	DevLI Np
Quintiles													
< 36.6	20	18	90.00	----	----	----	----	0.77	5.608e-01	1.081	2.55e-01	2.79e-01	2.66e-01
[36.6,49.2)	19	17	89.47	9.192e-01	4.778e-01	1.768	8.007e-01	0.62	4.787e-01				
[49.2,65.9)	19	15	78.95	8.660e-01	4.431e-01	1.693	6.739e-01	0.94	6.895e-01	2.370			
[65.9,105)	20	19	95.00	5.486e-01	2.719e-01	1.107	9.364e-02	0.77	4.321e-01	1.015			
≥ 105	21	20	95.24	1.156	6.038e-01	2.212	6.622e-01	0.68	4.594e-01	1.185			
Quartiles													
< 39.7	25	23	92.00	----	----	----	----	0.85	5.800e-01	1.081	8.99e-01	8.99e-01	9.12e-01
[39.7,54.5)	24	21	87.50	9.397e-01	5.185e-01	1.703	8.374e-01	0.69	5.471e-01	1.415			
[54.5,82.8)	24	20	83.33	8.978e-01	4.911e-01	1.641	7.261e-01	0.80	4.759e-01	1.180			
≥ 82.8	26	25	96.15	1.117	6.298e-01	1.981	7.048e-01	0.73	4.710e-01	9.879e-01			
Tertiles													
< 43.9	34	31	91.18	----	----	----	----	0.77	5.553e-01	1.081	1.55e-01	1.58e-01	9.09e-02
[43.9,72.3)	31	25	80.65	7.221e-01	4.223e-01	1.235	2.340e-01	0.82	6.238e-01	1.913			
≥ 72.3	34	33	97.06	1.207	7.354e-01	1.981	4.568e-01	0.68	4.513e-01	9.768e-01			
Profile Likelihood													
< 72.1	65	56	86.15	----	----	----	----	0.82	6.238e-01	9.879e-01	1.29e-01	1.20e-01	4.39e-02
≥ 72.1	34	33	97.06	1.410	9.119e-01	2.181	1.222e-01	0.68	4.513e-01	9.768e-01			
Quantitative													
	99	89	89.90	1.001	0.9968	1.005	7.260e-01				7.293e-01	7.259e-01	