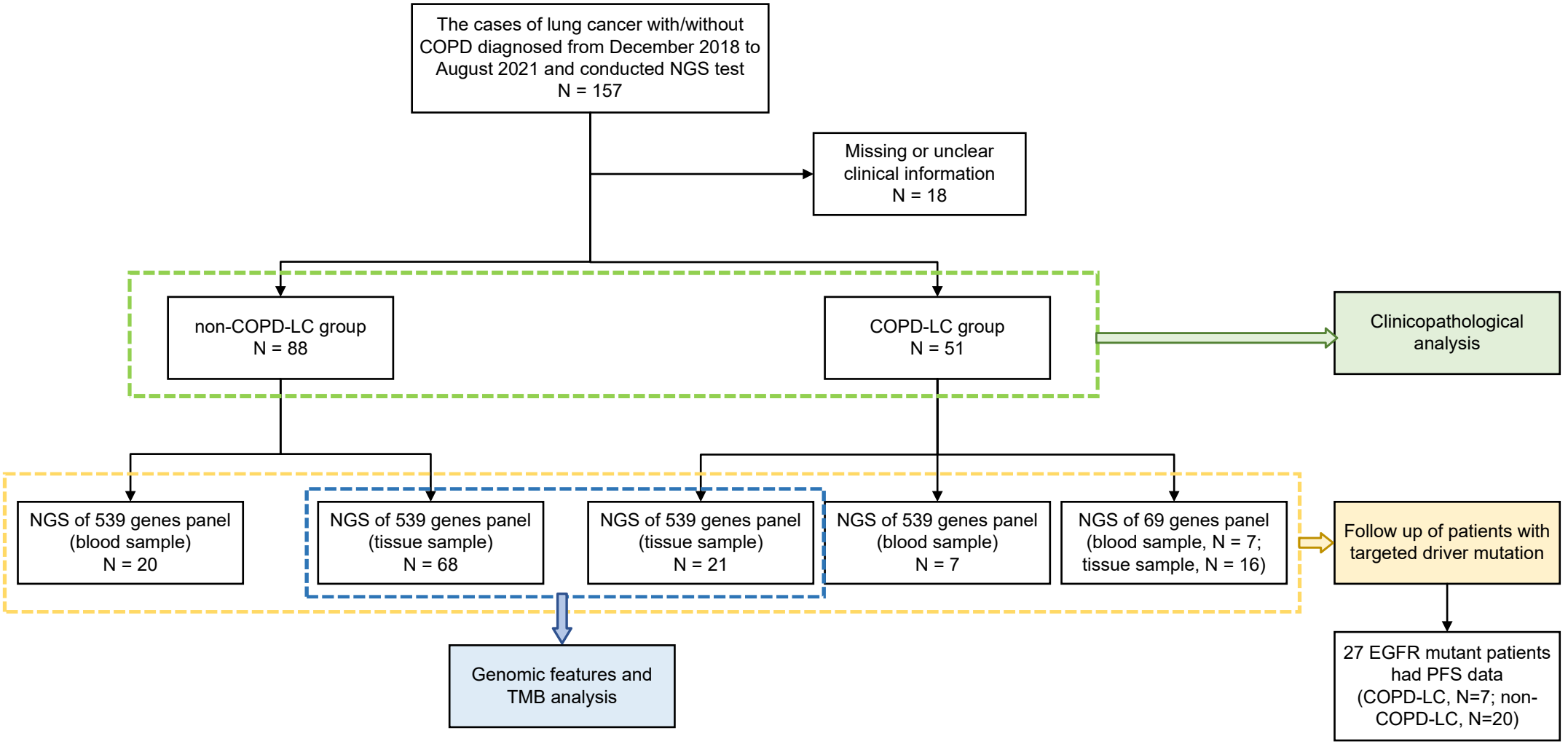
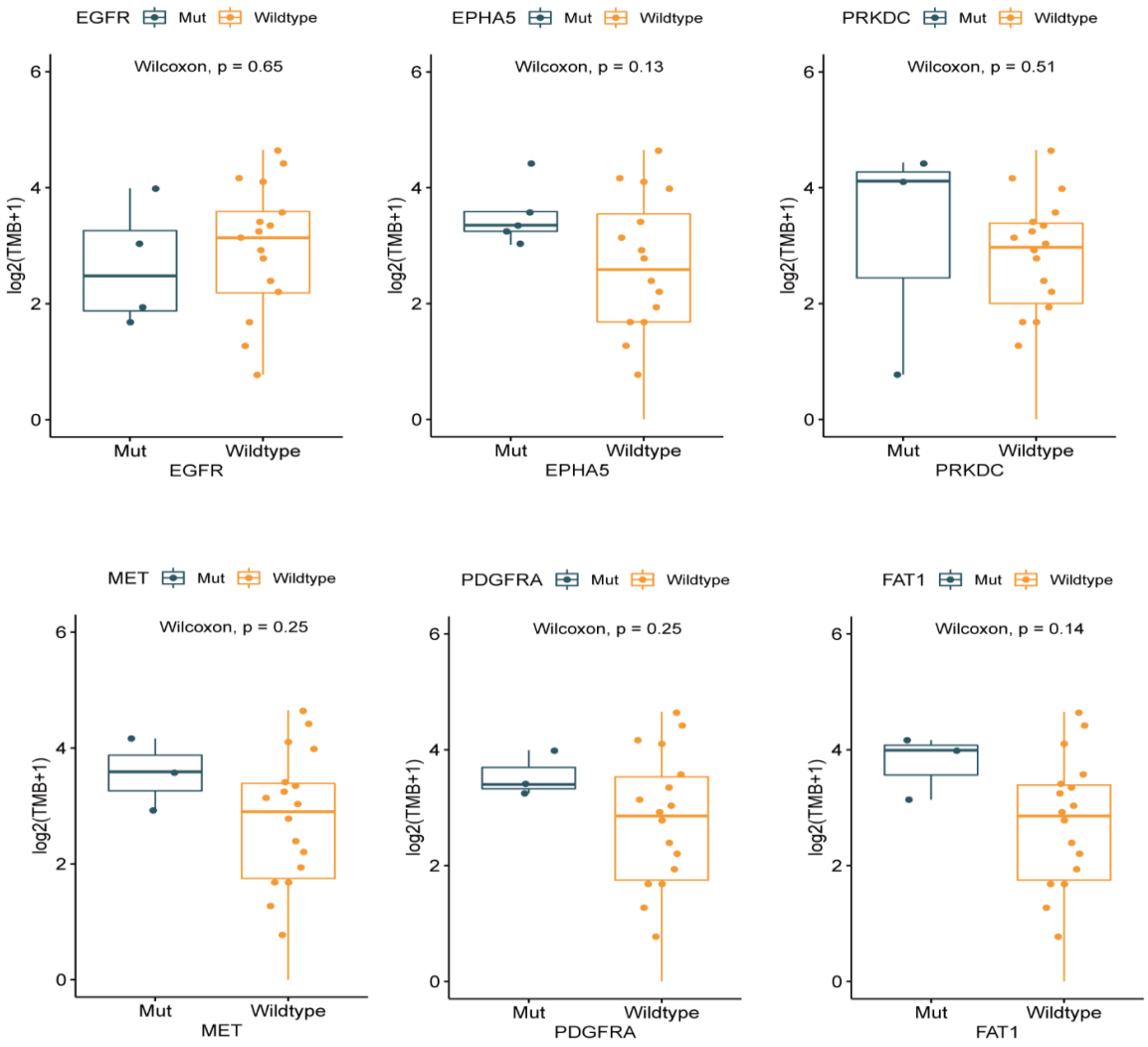
Supplementary materials



Supplementary Figure S1. Flowchart of this study.
(COPD: chronic obstructive pulmonary disease; COPD-LC: lung cancer with COPD; non-COPD-LC: lung cancer without COPD; NGS: next generation sequencing; TMB: tumor mutation burden)



Supplementary Figure S2. Relationship of differential mutation genes and TMB in COPD-LC.

Supplementary Table S1. Detailed information of enrolled patients in our Chinese cohort.

Patient number	Panel size	Sample type	Group	TMB	PD-L1 expression	PD-L1 status	Age	Gender	Smoking history	Pathology type	Stage
P1	panel69	blood	COPD	N/A	N/A	N/A	90	Female	N/A	Others	IV
P2	panel69	tissue	COPD	N/A	N/A	N/A	77	Female	N/A	Adneocarcinoma	IV
P3	panel69	tissue	COPD	N/A	N/A	N/A	66	Male	yes	Squamous-cell carcinoma	III B
P4	panel69	blood	COPD	N/A	N/A	N/A	69	Male	yes	Squamous-cell carcinoma	IV A
P5	panel69	blood	COPD	N/A	N/A	N/A	64	Male	no	Adenosquamous carcinoma	IV A
P6	panel539	blood	COPD	24	N/A	N/A	68	Male	no	Adneocarcinoma	III A
P7	panel69	tissue	COPD	N/A	N/A	N/A	71	Female	no	Adneocarcinoma	IV
P8	panel69	tissue	COPD	N/A	TC>5%	positive	81	Male	yes	Adneocarcinoma	III B
P9	panel69	blood	COPD	N/A	N/A	N/A	78	Male	N/A	Others	N/A
P10	panel69	tissue	COPD	N/A	TC>80%	positive	64	Male	no	Squamous-cell carcinoma	III A
P11	panel69	tissue	COPD	N/A	TC < 1%	negative	72	Female	no	Adneocarcinoma	IV B
P12	panel539	tissue	COPD	3.55	TC>50%	positive	73	Male	yes	Adneocarcinoma	IV B
P13	panel539	tissue	COPD	0.71	TC>90%	positive	73	Female	no	Adneocarcinoma	IV B
P14	panel539	tissue	COPD	7.09	TC < 1%	negative	75	Female	yes	Adneocarcinoma	IV A
P15	panel539	blood	COPD	3.55	N/A	N/A	75	Male	yes	Adneocarcinoma	IV A
P16	panel539	tissue	COPD	7.8	TC≥50%	positive	64	Male	yes	Adneocarcinoma	IV A
P17	panel539	blood	COPD	5.67	N/A	N/A	81	Male	yes	Squamous-cell carcinoma	III B
P18	panel69	tissue	COPD	N/A	N/A	N/A	84	Female	no	Adneocarcinoma	IV C
P19	panel539	tissue	COPD	2.84	TC≥1%	positive	84	Male	no	Adneocarcinoma	IV A
P20	panel69	tissue	COPD	N/A	N/A	N/A	80	Male	yes	Adneocarcinoma	IV A
P21	panel69	tissue	COPD	N/A	N/A	N/A	78	Male	no	Adenosquamous carcinoma	IV
P22	panel539	tissue	COPD	1.42	TC > 5%	positive	56	Male	no	Adneocarcinoma	II B
P23	panel539	tissue	COPD	16.31	TC>90%	positive	77	Male	no	Adneocarcinoma	IV B
P24	panel539	blood	COPD	30.5	TC<1%	negative	84	Male	yes	Adneocarcinoma	IV B
P25	panel539	tissue	COPD	24.11	TC<1%	negative	71	Male	yes	Adneocarcinoma	III B
P26	panel539	tissue	COPD	9.22	TC>80%	positive	74	Male	yes	Adneocarcinoma	III C
P27	panel539	blood	COPD	1.42	TC > 5%	positive	78	Male	yes	Squamous-cell carcinoma	II B
P28	panel69	blood	COPD	N/A	N/A	N/A	76	Male	N/A	Adneocarcinoma	IV
P29	panel69	tissue	COPD	N/A	N/A	N/A	69	Female	no	Adneocarcinoma	I A
P30	panel69	tissue	COPD	N/A	TC≥50%	positive	57	Male	yes	Squamous-cell carcinoma	III A
P31	panel539	tissue	COPD	14.89	TC<1%	negative	76	Male	yes	Adneocarcinoma	III B
P32	panel69	blood	COPD	N/A	TC > 90%	positive	77	Male	no	Squamous-cell carcinoma	IV A
P33	panel539	tissue	COPD	0	TC=0	negative	78	Male	yes	Adneocarcinoma	IV A
P34	panel539	tissue	COPD	11.03	TC > 10%	positive	76	Male	no	Adneocarcinoma	III B
P35	panel69	tissue	COPD	N/A	TC > 5%	positive	74	Male	yes	Adneocarcinoma	IV A
P36	panel69	tissue	COPD	N/A	TC=0	negative	76	Female	no	Adneocarcinoma	IV B
P37	panel539	tissue	COPD	20.59	TC=0	negative	78	Male	yes	Adneocarcinoma	IV A
P38	panel69	blood	COPD	N/A	N/A	N/A	87	Male	yes	Others	IV
P39	panel539	tissue	COPD	2.21	TC > 60%	positive	66	Male	yes	Adneocarcinoma	IV
P40	panel539	blood	COPD	2.94	N/A	N/A	57	Female	no	Others	III B
P41	panel539	tissue	COPD	9.56	TC=0	negative	63	Male	yes	Squamous-cell carcinoma	III B
P42	panel539	tissue	COPD	2.21	TC > 5%	positive	76	Female	no	Adneocarcinoma	IV A
P43	panel539	tissue	COPD	6.62	TC < 1%	negative	63	Male	yes	Squamous-cell carcinoma	IV A
P44	panel69	tissue	COPD	N/A	TC=0	negative	65	Male	yes	Squamous-cell carcinoma	IV A
P45	panel69	tissue	COPD	N/A	N/A	N/A	83	Male	yes	Squamous-cell carcinoma	IV A
P46	panel69	tissue	COPD	N/A	TC≥50%	positive	76	Male	yes	Adneocarcinoma	IV A
P47	panel539	tissue	COPD	16.91	TC > 25%	positive	76	Male	yes	Adneocarcinoma	IV A
P48	panel539	blood	COPD	10.29	N/A	N/A	80	Male	yes	Others	IV B
P49	panel539	tissue	COPD	5.88	TC≥50%	positive	59	Male	yes	Squamous-cell carcinoma	I A2
P50	panel539	tissue	COPD	8.51	TC=0	negative	63	Male	no	Adneocarcinoma	IV A
P51	panel539	tissue	COPD	4.26	TC > 10%	positive	71	Male	yes	Adneocarcinoma	IV A

Patient number	Panel size	Sample type	Group	TMB	PD-L1 expression	PD-L1 status	Age	Gender	Smoking history	Pathology type	Stage
P52	panel539	tissue	non-COPD	2.21	TC≥1%	positive	48	Male	yes	Adneocarcinoma	IVA
P53	panel539	tissue	non-COPD	5.88	TC=0	negative	64	Male	yes	Adneocarcinoma	IVA
P54	panel539	tissue	non-COPD	14.71	TC=0	negative	56	Male	yes	Squamous-cell carcinoma	II B
P55	panel539	tissue	non-COPD	1.47	TC < 1%	negative	79	Female	yes	Adneocarcinoma	IIIA
P56	panel539	tissue	non-COPD	1.42	TC < 1%	negative	49	Female	no	Adneocarcinoma	I A2
P57	panel539	tissue	non-COPD	4.96	TC < 1%	negative	64	Male	yes	Adneocarcinoma	IV
P58	panel539	tissue	non-COPD	2.13	TC < 1%	negative	54	Female	no	Adneocarcinoma	I A1
P59	panel539	tissue	non-COPD	2.84	TC > 70%	positive	58	Male	yes	Squamous-cell carcinoma	IIIA
P60	panel539	tissue	non-COPD	0.71	TC≥1%	positive	61	Male	yes	Adneocarcinoma	IVA
P61	panel539	tissue	non-COPD	7.8	TC=0	negative	73	Male	yes	Adneocarcinoma	IVB
P62	panel539	tissue	non-COPD	8.51	TC=0	negative	72	Male	yes	Adneocarcinoma	IVA
P63	panel539	tissue	non-COPD	2.84	TC > 90%	positive	58	Female	no	Adneocarcinoma	IVB
P64	panel539	tissue	non-COPD	13.48	TC > 5%	positive	83	Male	yes	Adneocarcinoma	IVA
P65	panel539	tissue	non-COPD	2.84	TC≥50%	positive	53	Male	yes	Adneocarcinoma	IVA
P66	panel539	tissue	non-COPD	2.13	TC=0	negative	73	Female	no	Adneocarcinoma	IVB
P67	panel539	tissue	non-COPD	2.84	TC≥50%	positive	57	Male	yes	Adneocarcinoma	IVA
P68	panel539	tissue	non-COPD	1.42	TC > 25%	positive	69	Female	no	Adneocarcinoma	IVA
P69	panel539	tissue	non-COPD	3.55	TC > 10%	positive	66	Female	no	Adneocarcinoma	IVA
P70	panel539	tissue	non-COPD	1.42	N/A	N/A	67	Female	no	Adneocarcinoma	IVA
P71	panel539	tissue	non-COPD	3.55	TC≥1%	positive	71	Female	no	Adneocarcinoma	IVA
P72	panel539	tissue	non-COPD	1.42	TC=0	negative	76	Female	no	Adneocarcinoma	IVB
P73	panel539	tissue	non-COPD	0	TC=0	negative	73	Female	no	Adneocarcinoma	IVA
P74	panel539	tissue	non-COPD	0.71	N/A	N/A	68	Male	yes	Others	IIIC
P75	panel539	tissue	non-COPD	1.42	TC < 1%	negative	69	Female	no	Others	II B
P76	panel539	tissue	non-COPD	1.42	TC≥50%	positive	54	Male	yes	Squamous-cell carcinoma	IVA
P77	panel539	tissue	non-COPD	0	TC=0	negative	80	Female	no	Adneocarcinoma	IVA
P78	panel539	tissue	non-COPD	1.42	TC≥50%	positive	77	Male	yes	Squamous-cell carcinoma	IVB
P79	panel539	tissue	non-COPD	3.55	TC≥1%	positive	66	Male	yes	Adneocarcinoma	IVA
P80	panel539	tissue	non-COPD	4.96	TC < 1%	negative	80	Male	no	Adneocarcinoma	IVA
P81	panel539	tissue	non-COPD	1.47	N/A	N/A	51	Female	no	Adneocarcinoma	N/A
P82	panel539	tissue	non-COPD	7.35	N/A	N/A	73	Male	yes	Squamous-cell carcinoma	IIIB
P83	panel539	tissue	non-COPD	0	TC=0	negative	76	Female	no	Adneocarcinoma	I A
P84	panel539	tissue	non-COPD	25	TC=0	negative	75	Female	no	Squamous-cell carcinoma	N/A
P85	panel539	tissue	non-COPD	10.29	TC=0	negative	55	Male	yes	Adneocarcinoma	IVB
P86	panel539	tissue	non-COPD	2.21	TC > 10%	positive	73	Female	no	Adneocarcinoma	IVA
P87	panel539	tissue	non-COPD	1.47	TC < 1%	negative	75	Female	no	Adneocarcinoma	IVA
P88	panel539	tissue	non-COPD	2.94	TC > 60%	positive	60	Male	yes	Adneocarcinoma	IV
P89	panel539	tissue	non-COPD	2.94	TC=0	negative	68	Female	no	Adneocarcinoma	IV
P90	panel539	tissue	non-COPD	7.35	TC=0	negative	85	Female	no	Squamous-cell carcinoma	IV
P91	panel539	tissue	non-COPD	4.41	TC=0	negative	69	Female	no	Adneocarcinoma	N/A
P92	panel539	tissue	non-COPD	0.74	TC=0	negative	58	Female	no	Adneocarcinoma	I A2
P93	panel539	tissue	non-COPD	2.94	TC > 5%	positive	51	Male	yes	Adneocarcinoma	IVB
P94	panel539	tissue	non-COPD	6.62	TC < 1%	negative	74	Female	no	Adneocarcinoma	IVA
P95	panel539	tissue	non-COPD	0	TC > 10%	positive	56	Female	no	Adneocarcinoma	IVB

Patient number	Panel size	Sample type	Group	TMB	PD-L1 expression	PD-L1 status	Age	Gender	Smoking history	Pathology type	Stage
P96	panel539	tissue	non-COPD	1.47	TC > 70%	positive	54	Male	no	Adneocarcinoma	IVA
P97	panel539	tissue	non-COPD	5.88	TC≥1%	positive	86	Female	no	Adneocarcinoma	IIIB
P98	panel539	tissue	non-COPD	2.94	TC≥1%	positive	78	Male	no	Adneocarcinoma	I B
P99	panel539	tissue	non-COPD	2.94	TC < 1%	negative	70	Female	no	Adneocarcinoma	IV
P100	panel539	tissue	non-COPD	2.94	TC < 1%	negative	76	Male	yes	Adneocarcinoma	IVA
P101	panel539	tissue	non-COPD	2.94	TC < 1%	negative	53	Female	no	Adneocarcinoma	I A2
P102	panel539	tissue	non-COPD	4.41	TC=0	negative	64	Female	no	Adneocarcinoma	IIIC
P103	panel539	tissue	non-COPD	5.88	TC < 1%	negative	54	Male	yes	Adneocarcinoma	IIIC
P104	panel539	tissue	non-COPD	3.68	TC > 5%	positive	86	Male	yes	Adneocarcinoma	IVA
P105	panel539	tissue	non-COPD	5.88	TC≥50%	positive	47	Male	yes	Adneocarcinoma	IVB
P106	panel539	tissue	non-COPD	1.47	TC≥1%	positive	48	Female	no	Adneocarcinoma	IV
P107	panel539	tissue	non-COPD	4.41	TC≥1%	positive	75	Female	no	Adneocarcinoma	IVB
P108	panel539	tissue	non-COPD	2.94	TC≥50%	positive	66	Male	yes	Adneocarcinoma	IV
P109	panel539	tissue	non-COPD	0.74	TC=0	negative	69	Male	no	Squamous-cell carcinoma	IVA
P110	panel539	tissue	non-COPD	2.94	TC > 25%	positive	67	Male	yes	Adneocarcinoma	IVA
P111	panel539	tissue	non-COPD	7.35	TC≥50%	positive	72	Male	no	adenosquamous carcinoma	IV
P112	panel539	blood	non-COPD	11.76	TC=0	negative	80	Male	no	Squamous-cell carcinoma	IVA
P113	panel539	blood	non-COPD	0.74	N/A	N/A	69	Female	no	Adneocarcinoma	IVB
P114	panel539	blood	non-COPD	10.64	N/A	N/A	52	Male	yes	Adneocarcinoma	IVB
P115	panel539	blood	non-COPD	0.71	N/A	N/A	59	Female	no	Adneocarcinoma	IVA
P116	panel539	blood	non-COPD	2.13	TC≥50%	positive	48	Male	yes	Adneocarcinoma	IVB
P117	panel539	blood	non-COPD	0	N/A	N/A	73	Female	no	Adneocarcinoma	IV
P118	panel539	blood	non-COPD	1.42	TC=0	negative	60	Male	no	Adneocarcinoma	IVB
P119	panel539	blood	non-COPD	2.13	TC≥50%	positive	79	Female	no	Adneocarcinoma	N/A
P120	panel539	blood	non-COPD	1.42	N/A	N/A	51	Male	yes	Adneocarcinoma	IVB
P121	panel539	blood	non-COPD	6.38	TC > 70%	positive	74	Male	yes	Others	IVB
P122	panel539	blood	non-COPD	28.37	TC=0	negative	81	Female	yes	Squamous-cell carcinoma	IVA
P123	panel539	blood	non-COPD	4.41	N/A	N/A	61	Male	yes	Adneocarcinoma	IV
P124	panel539	blood	non-COPD	0	TC≥1%	positive	65	Female	no	Squamous-cell carcinoma	IVA
P125	panel539	blood	non-COPD	0.74	TC < 1%	negative	52	Female	no	Adneocarcinoma	IVB
P126	panel539	blood	non-COPD	11.76	TC≥50%	positive	74	Female	no	Adneocarcinoma	IVA
P127	panel539	blood	non-COPD	1.47	TC≥1%	positive	78	Female	no	Adneocarcinoma	IVA
P128	panel539	blood	non-COPD	1.47	N/A	N/A	61	Female	no	Adneocarcinoma	IVB
P129	panel539	blood	non-COPD	0	TC≥50%	positive	71	Female	no	Adneocarcinoma	IVA
P130	panel539	blood	non-COPD	4.41	N/A	N/A	74	Male	yes	Adneocarcinoma	IVA
P131	panel539	blood	non-COPD	2.21	N/A	N/A	64	Female	no	Squamous-cell carcinoma	IV
P132	panel539	tissue	non-COPD	1.47	TC≥1%	positive	66	Female	no	Adneocarcinoma	IIIA
P133	panel539	tissue	non-COPD	0.74	TC≥1%	positive	53	Female	no	Adneocarcinoma	IV
P134	panel539	tissue	non-COPD	4.41	TC > 25%	positive	82	Female	no	Adneocarcinoma	IVA
P135	panel539	tissue	non-COPD	1.42	TC=0	negative	49	Female	no	Adneocarcinoma	I A1
P136	panel539	tissue	non-COPD	3.68	TC≥50%	positive	54	Male	yes	Adneocarcinoma	IVA
P137	panel539	tissue	non-COPD	11.35	TC=0	negative	58	Male	yes	Squamous-cell carcinoma	IVB
P138	panel539	tissue	non-COPD	3.68	TC < 1%	negative	70	Male	yes	Adneocarcinoma	IVA
P139	panel539	tissue	non-COPD	4.26	TC > 5%	positive	81	Male	no	Adneocarcinoma	IVB

Patient number	C-reaction protein	Procalcitonin	Interleukin-6	D dimer	Hemoglobin	Percentage of lymphocytes	Monocyte percentage	Neutrophil percentage	eosinophils percentage	Absolute value of eosinophils	Erythrocyte sedimentation rate	Albumin	Alpha-fetoprotein (AFP)	Carcinoembryonic antigen (CEA)	Cytokeratin-19 (CYF)	Neuron-specific enolase(NSE)	Squamous cell carcinoma antigen (SCC)
P1	11.2	0.11	3.95	N/A	112	16.3	10	72.8	0.5	0.05	6	31.9	1.36	4.38	10.21	15.28	1.3
P2	168.5	0.31	158.8	N/A	139	3.8	5.8	89.7	0.6	0.1	28	28.2	2.32	2.28	9.51	16.09	1.7
P3	N/A	0.05	6.54	N/A	143	17.22	8.8	72.51	1.5	0.13	3	39.3	3.12	2.27	1.81	17.82	0.9
P4	5.4	0.03	1.9	N/A	169	37.8	8.3	50.6	2.6	0.16	2	37.9	4.13	2.09	10.11	15.01	3.5
P5	5	0.03	6.64	N/A	122	31.2	13.9	50.5	3.4	0.14	25	33	4.76	5.01	2.23	9.79	0.9
P6	N/A	N/A	N/A	N/A	133	28.4	8	62.3	1.3	0.04	N/A	40.69	2.77	0.9	2.76	14.36	0.7
P7	39.9	0.05	46.2	N/A	147	21.9	9.8	67.9	0.2	0.01	36	36.3	1.24	1.56	4.24	31.28	1.5
P8	195.6	0.08	63.55	N/A	119	3.9	3.4	92.1	0.5	0.05	15	31.1	1.53	2.98	7.76	37.68	1.4
P9	116	0.04	331.2	N/A	166	39.7	0.2	57.6	2.1	0.1	N/A	42.4	4.62	3.24	3.49	16.72	1.7
P10	N/A	0.03	14.84	N/A	171	21.6	7.9	68.7	1	0.11	3	48	2.49	2.28	2.42	16.97	0.7
P11	5	0.02	16.22	1.2	112	33.4	10.1	50.4	5.3	0.19	16	32.27	1.64	1.92	2.12	15.97	1.2
P12	75.4	0.12	83.71	1.65	114	6.5	8.3	84.2	0.6	0.06	60	30.7	1.3	2.84	40.27	20.94	0.6
P13	64.2	0.1	26.09	N/A	128	15.3	8.1	73.9	2.2	0.24	29	32.6	2.14	12.64	14.99	21.22	18.6
P14	55.2	0.1	30.6	N/A	124	8.7	6.7	86.9	0.6	0.1	N/A	35.98	1.99	5.02	3.54	12.88	10.7
P15	21.7	0.05	29.38	N/A	145	17.6	9.2	72.3	0.7	0.06	14	35.75	1.72	2.75	6.54	16.08	0.7
P16	N/A	N/A	N/A	117	117	28.5	8.5	60.1	2.4	0.19	86	31.2	1.51	2.98	10.25	20.36	2.6
P17	12.9	0.05	33.92	0.79	150	13.7	14.7	70.3	0.08	0.7	11	39.44	1.73	3.8	14.63	20.41	8.9
P18	3.19	0.02	4.96	1.22	138	20.7	9	69.6	0.01	0.2	15	35	3.56	8.12	2.83	13.94	0.7
P19	N/A	0.11	2.08	1.42	120	34.5	8	56.4	0.04	0.7	12	43.81	1.87	6.68	2.87	12.51	1.1
P20	13.2	0.03	15.5	3.2	136	8.4	1.1	90.3	0.4	0	28	38.52	5.3	348.2	6.87	19.97	1.8
P21	5	0.04	24.6	0.98	142	24.2	6.8	66.1	0.17	2.6	7	30.8	3.78	4.79	12.6	27.03	1.1
P22	8	0.06	1.78	0.53	150	36	10.3	51.4	0.1	1.9	2	38	1.27	2.71	4.16	17.11	1.2
P23	N/A	0.07	16.24	0.69	137	8.8	8.6	80.4	0.16	1.7	27	35.4	1.38	3.39	9.33	23.62	4.5
P24	30.1	0.05	20.15	1.12	116	8.1	13.1	76.8	0.13	1.7	8	36	2.33	2.79	11.37	67.38	0.8
P25	5	0.06	3.93	0.62	146	21.1	3.5	74.1	0.08	0.9	13	36.8	2.78	53.64	3.09	15.56	1.2
P26	20	0.02	11.63	0.66	124	19.9	7.3	70.9	0.11	1.6	20	36.1	3.15	9.22	22.53	21.02	1.4
P27	N/A	N/A	N/A	0.79	173	32	12.1	51.8	0.14	3.4	N/A	35.4	1.79	3.25	11.68	25.09	14
P28	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
P29	N/A	N/A	N/A	0.28	137	26.5	7.3	65.2	0.5	0.03	13	40.5	82.28	2.61	2	21.25	0.4
P30	169.2	0.07	94.33	0.77	146	13.6	9.4	76.7	0.02	0.1	2	38.6	1.23	4.46	4.09	24.29	1.7
P31	N/A	0.05	14.08	0.82	136	22.1	8.9	66.4	0.22	2.4	59	34.8	3.56	97.44	22.32	17.94	2.7
P32	5	0.03	7.43	0.38	123	32.6	7.4	56.4	0.17	2.9	14	33.3	2.83	3.46	6.67	16.29	2
P33	43.3	N/A	N/A	0.99	141	18.4	9.5	68.6	0.29	3	24	35.16	5.58	7.52	9.08	14.76	1.4
P34	2.14	N/A	1.5	0.34	134	25.4	15.7	57.5	0.06	1.2	10	37.4	2.22	16.52	3.22	16.62	0.7
P35	28.7	0.02	4.9	0.86	119	28	8.4	58.3	0.24	5.1	42	30.5	1.85	25.93	4.64	14.96	4.7
P36	60.1	0.13	N/A	2.5	94	51.3	19.3	19.8	0.36	9.6	10	63.52	4.66	11.91	12.27	16.83	2.4
P37	51.7	N/A	N/A	6.01	113	11.5	9.5	77.9	0.04	0.4	20	32.1	N/A	N/A	N/A	N/A	3.3
P38	21.8	0.05	27.02	8.46	118	21.6	9.2	64.5	0.24	4	N/A	33.7	2.35	3.15	63.77	26.1	2.9
P39	56.2	N/A	N/A	0.76	94	7.1	13.4	76.8	0.2	2.5	N/A	24	1.22	19.67	43.21	N/A	0.7
P40	3.72	0.02	5.99	9.76	137	32	10	56.1	0.09	1.7	10	N/A	4.42	3.2	9	21.6	0.8
P41	6	0.02	N/A	0.38	138	28.7	8	59.4	0.31	3.7	10	N/A	2.37	1.96	10.09	13.01	1.2
P42	12.7	0.05	15.29	1.33	129	23.7	8.2	66.6	o.09	1.2	39.2	36.1	1.03	19.03	7.43	16.61	0.5
P43	19.5	0.03	7.36	0.78	125	32	7.4	56.3	0.17	4.1	18	37.8	2.77	2.69	2.39	18.43	0.9
P44	24.1	0.05	N/A	0.57	164	30.5	6.9	59.1	0.23	3.2	4	39.2	3.32	4.99	2.12	19.81	0.9
P45	54.8	0.14	22.05	1.38	142	13	16.3	69.4	0.23	0.9	N/A	N/A	3.26	4.58	4.08	12.99	6.4
P46	39.5	0.02	20.68	0.92	141	20.64	6.84	55.74	1.65	16.74	35	31.1	2.62	29.3	18.74	86.41	0.7
P47	14.7	N/A	7.13	N/A	135	24	8.9	58.8	7.7	0.54	N/A	35.9	1.25	205.6	5.69	14.13	1.3
P48	215	N/A	217.5	N/A	132	10.2	7.3	82.3	0.1	0.01	23	35.1	3	2.8	1041	14.78	0.58
P49	1.01	N/A	2.82	N/A	152	36.2	6.4	54.4	2.8	0.17	8	41.6	3.66	2.03	1.63	13.83	0.4
P50	37.1	0.02	46.73	N/A	135	11.9	10.2	76.5	0.5	0.04	36	39.15	1.13	1000	150.9	37.64	2.4
P51	40.7	0.62	27.45	N/A	142	15.5	10.1	73	0.8	0.05	18	37.3	2.79	22.4	9.03	12.46	0.6

Patient number	C-reaction protein	Procalcitonin	Interleukin-6	D dimer	Hemoglobin	Percentage of lymphocytes	Monocyte percentage	Neutrophil percentage	eosinophils percentage	Absolute value of eosinophils	Erythrocyte sedimentation rate	Albumin	Alpha-fetoprotein (AFP)	Carcinoembryonic antigen (CEA)	Cytokeratin-19 (CYF)	Neuron-specific enolase(NSE)	Squamous cell carcinoma antigen (SCC)
P52	5	N/A	4.61	N/A	162	24.2	6.3	68.5	1	0.06	2	39.6	1.8	4.24	7.2	18.2	0.7
P53	5	N/A	7.67	N/A	143	32.4	8.6	52.5	6.5	0.44	7	39.1	2.97	4.87	3.58	16.38	1.3
P54	5	N/A	33.18	N/A	146	40.7	6.9	51.3	0.9	0.04	27	45.8	2.71	1.62	8.89	12.29	2.6
P55	N/A	0.02	284.6	N/A	135	45.1	6.9	45.5	2.1	0.15	N/A	38.7	N/A	N/A	N/A	N/A	N/A
P56	N/A	N/A	N/A	N/A	140	29	10.5	58.7	1.3	0.11	N/A	44.6	5.65	0.16	1.49	11.61	0.5
P57	N/A	0.03	27.99	N/A	152	33.8	7.1	55.7	3.1	0.24	8	42.8	2.53	11.84	3.7	10.2	0.7
P58	N/A	0.06	7.24	N/A	127	40.5	6.8	51.4	1	0.06	9	41.9	4.61	1.43	3.1	16.19	0.7
P59	7.49	0.06	15.56	N/A	145	31.1	8.8	56.5	2.7	0.16	8	36.9	4.67	3.45	8.96	15.86	1
P60	47.7	0.12	24.18	N/A	127	21.1	7.2	70.3	1	0.05	20	34.2	4.72	17.25	6.55	18.9	0.9
P61	14.8	0.03	4.06	N/A	137	26	7.6	63.2	2.6	0.2	18	34.8	3.68	13.98	11.7	11.7	0.7
P62	19.2	0.05	16.51	N/A	135	25.6	10.6	58.6	4.5	0.25	34	34.2	2.54	0.62	19.52	19.52	17.45
P63	70.8	0.13	89.94	N/A	119	18.7	10	66.9	3.9	0.48	43	33.54	4.22	7.35	7.09	36.82	0.4
P64	23.5	0.02	12.66	N/A	171	18.6	9.4	69.6	2	0.15	2	36.4	2.65	7.52	19.72	23.42	23.42
P65	1	0.02	1.85	N/A	141	36.1	8.5	53.2	1.8	0.09	2	40.5	2.4	15.64	2.96	18.53	18.53
P66	2.61	0.02	25.56	N/A	116	30.9	8.6	56.5	3.3	0.18	35	41.7	1.7	4.96	3.79	13.94	13.94
P67	8.5	0.04	2.94	N/A	136	16.1	5.8	76.5	1.3	0.09	N/A	43.4	2.54	0.45	1.66	14.24	0.8
P68	5	0.05	10.89	N/A	99	20.7	11.2	65.1	2.6	0.12	29	34.7	4.23	5.07	9.76	42.78	3.3
P69	N/A	0.02	3.7	N/A	132	25.7	6	24.9	2.5	0.14	10	40.8	2.73	9.57	2.22	15	0.4
P70	8	0.02	19.15	N/A	136	28.9	8.5	57	5.2	0.23	N/A	38.5	2.63	1.75	5.39	25.79	0.6
P71	8.6	0.05	6.06	N/A	121	22	8.3	64.7	4.4	0.21	19	30.6	3.21	1.38	11.2	19.86	20.9
P72	42.42	0.06	30.84	N/A	121	17	6.9	74.5	1.2	0.08	4	36.8	2.67	17.78	47.64	53.34	0.7
P73	N/A	0.06	2.64	N/A	129	37.4	7.2	53.1	1.9	0.1	12	38.2	1.81	2.66	4.22	9.46	0.6
P74	5	0.03	5.59	N/A	139	34.5	7	57.6	0.8	0.06	27	36	5.26	4.27	4.72	15.25	1
P75	18.5	0.02	11.41	N/A	121	29.4	6	58.6	5.5	0.23	42	35.31	2.64	1.44	2.53	25.59	1.1
P76	37	0.03	45.54	N/A	130	21.5	9.8	61.7	6	0.43	26	36.4	1.88	3.11	13.72	15.01	2.2
P77	19.7	0.04	5.31	N/A	121	21.2	17.7	57.8	2.8	0.17	13	38.13	1.98	4.18	3.38	24.33	0.5
P78	19.1	0.03	11.74	0.85	134	15.2	7.9	75.8	0.05	0.8	N/A	29.9	1.08	1.05	11.48	16.49	1.1
P79	N/A	N/A	N/A	0.39	139	25.5	6.8	65.5	0.13	1.7	20	33.3	3.9	1.51	1.86	17.09	0.7
P80	43.92	N/A	N/A	1.24	112	24.1	8.9	64.6	0.13	1.8	100	29	1.22	175.9	3.57	39.44	0.4
P81	3.21	N/A	N/A	0.26	125	34.8	4.8	59.2	0.9	0.06	9	36.2	N/A	N/A	N/A	N/A	N/A
P82	15.08	0.02	4.7	0.69	149	20.9	7.7	69.7	0.13	0.3	11	43.6	0.43	6.58	3.73	17.5	1.9
P83	0.7	N/A	N/A	0.6	121	26	7.8	665.1	0.05	0.7	N/A	44.6	6.87	2.38	3.48	13.67	1
P84	41	0.12	22.19	0.34	129	21.6	7	70.3	0.04	0.5	81	33.8	1.88	13.84	39.58	21.93	3
P85	7	0.02	5.98	0.55	155	25.2	9.1	63.9	0.06	1	14	57.6	3.96	29.09	20.35	30.41	1
P86	60	0.02	N/A	12.38	127	5.5	1.6	92.7	0	0.2	N/A	39.9	2.7	209.2	74.36	28.31	0.3
P87	5	0.03	7.13	1.63	118	40	11.6	46.7	1.2	0.5	18	34.9	1.5	3.18	2.55	23.49	0.8
P88	14.4	0.02	1.67	0.6	174	26.5	7.8	63.1	1.9	0.1	6	40.3	4.39	7.51	3.81	22.8	1.1
P89	38.6	0.04	33.56	2.19	129	24.7	5.7	65.5	3.7	0.21	48	29.2	1.46	72.93	4.43	15.53	0.5
P90	25.2	0.05	15.23	0.65	129	27.3	5.4	65.8	1.1	0.11	N/A	41.4	4.78	2.47	6.04	24.95	0.7
P91	20.8	0.02	3.68	0.67	100	39.1	8.6	50	1.8	0.08	32	35.3	8.33	3.43	5.69	16.8	0.8
P92	1.49	N/A	N/A	0.16	133	39.9	4.6	54.6	0.9	0.05	N/A	38.1	4.51	1.37	1.42	12.14	0.9
P93	24.3	0.07	57.77	24.62	136	21.4	7.9	66	4.4	0.39	32	42	5.24	45.94	26.51	44.95	0.3
P94	6.1	0.1	N/A	0.73	106	21.8	6.7	70	1.3	0.06	26	42.4	1.97	4.06	2.21	11.79	0.8
P95	N/A	N/A	N/A	1.49	133	22.3	9.1	67.3	1.2	0.09	N/A	35	4.01	0.65	1.91	15.24	0.5

Patient number	C-reaction protein	Procalcitonin	Interleukin-6	D dimer	Hemoglobin	Percentage of lymphocytes	Monocyte percentage	Neutrophil percentage	eosinophils percentage	Absolute value of eosinophils	Erythrocyte sedimentation rate	Albumin	Alpha-fetoprotein (AFP)	Carcinoembryonic antigen (CEA)	Cytokeratin-19 (CYF)	Neuron-specific enolase(NSE)	Squamous cell carcinoma antigen (SCC)
P96	14.3	0.03	N/A	0.87	149	15	5.8	75.4	3.2	0.23	8	40.55	0.61	0.56	4.18	21.66	0.7
P97	5	0.02	5.25	3.69	123	20.5	9.4	69.1	0.5	0.03	13	36.3	4.2	34.83	6.2	21.34	0.9
P98	N/A	N/A	N/A	2.71	136	16.4	9.3	4.09	1.9	0.11	N/A	28.2	N/A	N/A	N/A	N/A	N/A
P99	N/A	0.06	3.86	2.5	133	28.2	7	62.3	2.3	0.13	N/A	41	0.61	0.44	2.14	21.32	0.5
P100	N/A	0.05	39.16	1.3	127	13.5	15.9	58.1	2.2	0.19	60	36.5	0.61	40.22	6.64	12.99	0.9
P101	N/A	0.03	3.14	0.56	139	40.7	4.4	53.3	1.3	0.1	8	42	4.95	1.48	3.06	22.23	0.6
P102	N/A	0.05	3.84	0.31	137	35.2	6.1	54.5	4	0.23	10	38.6	2.75	2	4.17	19.83	1.9
P103	6.1	0.04	N/A	0.85	159	22.7	7.5	65.1	1.1	0.29	6	44.4	3.32	1.63	16.58	19.1	0.9
P104	9.7	0.03	12.72	0.87	161	14.5	8.6	76	0.8	0.08	7	42.4	1.29	52.19	4.39	28.31	0.8
P105	23	0.07	12.77	0.91	157	10.06	7.4	77.1	0.27	4.1	16	38.2	1.61	3.05	6.81	15.57	1.1
P106	6.2	0.04	4.59	0.81	107	8	5.7	86.2	0.06	1.7	20	41.4	2.11	43.84	3.88	11.43	0.4
P107	<5	0.02	8.8	2.02	130	20.4	5.2	73.81	0.02	0.4	16	36	1.2	109.7	9.97	14.47	0.4
P108	6.27	0.02	11.59	0.79	161	33.1	6.3	58.1	0.13	2.3	11	41.7	2.62	45.68	8.13	18.89	0.5
P109	2.07	0.02	12.32	0.62	171	14.8	6.7	77.8	0.05	0.4	7	39.7	2.59	134	10.63	16.9	13.6
P110	<5	0.02	1.5	0.44	172	26	6.1	65.3	0.22	2.5	1	41.1	1.83	9.31	2.21	19.64	0.9
P111	30.3	0.02	24.29	1.5	150	13.7	9.3	74.1	0.23	2.5	16	36.2	1.67	2.56	8.26	22.79	0.6
P112	9.7	0.23	67.61	2.28	125	9.94	11.64	78.24	0.02	0.24	44	33.7	1.32	2.84	14.41	14.44	1.8
P113	8.1	0.02	21.26	1.1	137	31	7.1	56.6	0.21	4.8	38	30.5	1.26	4.25	3.53	14.33	0.8
P114	18.4	0.04	14.12	15.05	160	14.4	6.1	77.9	0.11	1.2	N/A	45.5	4.56	10.75	3.76	16.25	0.4
P115	5	0.02	7.25	4.46	108	49.5	6.5	42.7	0.02	0.9	5	37.1	2.79	1.61	3.8	11.71	1.1
P116	35.1	0.05	23.2	2.94	141	22.9	9.6	65.4	0.13	1.5	7	36	5.73	2.3	7.21	22.63	0.7
P117	5	0.02	3.58	0.23	125	31.8	8	51.4	0.31	8.3	14	32.63	2.98	3.21	2.25	12.02	0.9
P118	3.09	0.02	12.96	0.84	167	21.1	5.6	71.6	0.08	1.1	8	36.3	3.94	11.44	1.87	13.43	0.6
P119	4.76	0.02	14.68	1.01	119	17.1	7.9	69	0.37	5.4	14	34.8	3.12	5.47	2.48	21.57	0.9
P120	21.9	0.04	4.56	2.16	145	16.4	9.4	70.4	0.23	3.1	3	40	4.44	2.63	5.61	37.15	0.5
P121	17.9	0.04	30.4	1.19	131	28	14.4	51.4	0.29	5.3	71	34.4	1.31	2.54	5.19	17.61	1.1
P122	N/A	N/A	N/A	1.11	134	14	7.9	70.6	0.37	6.6	52	36.9	4.02	4.99	27.54	21.1	0.8
P123	12.2	0.14	16.33	2.92	118	22.5	9	64.4	0.19	3.7	16	28	1.08	102.6	4.79	26.43	1.4
P124	33.6	0.09	N/A	0.76	133	7	3.6	88.9	0.03	0.3	10	42.3	3.56	o.76	2.86	N/A	0.3
P125	19	0.02	N/A	9.15	113	15.4	8.9	73.8	0.14	1.7	34	30.3	3.44	59.38	4.96	N/A	0.5
P126	180.4	0.16	N/A	2.4	89	12.3	5.5	81.5	0.07	0.5	79	35.3	2.72	27.39	31.31	31.88	0.6
P127	2.5	N/A	N/A	N/A	127	32.3	8.3	56.9	2	0.12	12	35.5	4.72	3.59	2.57	16.78	0.7
P128	8.8	4.46	6.76	N/A	127	19.3	12.4	64.6	2.7	0.11	46	37.66	5.04	138.3	2.1	15.62	0.5
P129	11.2	0.02	7.62	N/A	137	15.5	6.8	75.3	1.7	0.13	6	35.5	2.5	2.38	4.7	16.58	0.6
P130	14.4	0.16	25.36	N/A	139	28.8	8.7	60.7	1.6	0.1	20	37.5	7.61	12.42	8.65	14.63	3.1
P131	7.3	0.02	5.87	N/A	137	28.4	6.5	62.6	2.1	0.16	59	42.4	5.44	56.2	6.26	21.22	0.4
P132	5	0.5	2.25	1.32	110	36	8.1	53.5	o.1	2.2	16	36.4	2.4	1.16	2.25	15.23	0.4
P133	5	0.03	2.37	0.47	140	44.3	9.3	43.8	0.24	2.1	12	40.2	2.2	1.96	3	14.59	0.6
P134	5	0.02	1.89	0.42	129	38.3	11.5	45.2	0.21	3.9	12	61.7	2.98	2.11	3.54	13.4	0.4
P135	N/A	0.03	8.04	N/A	131	30.8	9.4	57.7	1.4	0.12	21	39.5	4.88	1.91	2.02	16.91	1
P136	16.2	0.02	3.97	1.45	139	19.3	7.2	72.2	1	0.07	13	39.5	8.77	1.61	57.56	18.74	0.7
P137	39.6	0.08	16.25	N/A	140	12.6	9.1	74.1	3.5	0.24	16	38.5	2.51	1.7	2.79	17.67	0.6
P138	N/A	N/A	N/A	N/A	133	40.4	21.7	30.8	0.15	6.3	N/A	33.9	3.36	3.96	3.23	14.86	1.2
P139	20.2	0.08	10.02	37.09	129	13.2	9.2	72.7	0.32	4.1	N/A	36	1.86	49.96	7.21	16.06	2

Patient number	VC MAX	FVC	FVC%	FEV1	FEV1%	FEV1/FVC	Notes	COPD treatment
P1	N/A	N/A	N/A	N/A	N/A	N/A	The patient with COPD history (FEV1/FVC<0.7)	N/A
P2	N/A	N/A	N/A	N/A	N/A	N/A	The patient with COPD history (FEV1/FVC<0.7)	N/A
P3	N/A	N/A	N/A	N/A	N/A	N/A	The patient with COPD history (FEV1/FVC<0.7)	Budesonide and Formoterol Fumarate
P4	72.4	3.27	75.3	2.15	64.6	0.6574924		Beclometasone Pressurised Inhalation+Ipratropium Bromide Solution for Inhalation
P5	47.3	1.94	49	1.07	34.5	0.5515464		Salmeterol Fluticasone
P6	N/A	N/A	N/A	N/A	N/A	N/A	The patient with COPD history (FEV1/FVC<0.7)	Budesonide+Acetylcysteine
P7	N/A	N/A	N/A	N/A	N/A	N/A	The patient with COPD history (FEV1/FVC<0.7)	N/A
P8	N/A	N/A	N/A	N/A	N/A	N/A	The patient with COPD history (FEV1/FVC<0.7)	Acetylcysteine+Ipratropium Bromide Solution for Inhalation
P9	1.91	60	0.99	41.2	51.68	0.6866667		Salmeterol Xinafoate and Fluticasone Propionate +Indacaterol Maleate and Glycopyrronium Bromide
P10	N/A	N/A	N/A	N/A	N/A	N/A	The patient with COPD history (FEV1/FVC<0.7)	N/A
P11	N/A	N/A	N/A	N/A	N/A	N/A	The patient with COPD history (FEV1/FVC<0.7)	Salmeterol Xinafoate and Fluticasone Propionate
P12	N/A	N/A	N/A	N/A	N/A	N/A	The patient with COPD history (FEV1/FVC<0.7)	N/A
P13	N/A	N/A	N/A	N/A	N/A	N/A	The patient with COPD history (FEV1/FVC<0.7)	N/A
P14	N/A	N/A	N/A	N/A	N/A	N/A	The patient with COPD history (FEV1/FVC<0.7)	N/A
P15	91.6	3.46	94.9	2.33	81.8	0.6734104		Salmeterol Xinafoate and Fluticasone Propionate
P16	N/A	N/A	N/A	N/A	N/A	N/A	The patient with COPD history (FEV1/FVC<0.7)	N/A
P17	N/A	N/A	N/A	N/A	N/A	N/A	The patient with COPD history (FEV1/FVC<0.7)	N/A
P18	125.1	1.59	136	0.87	74.5	0.5471698		N/A
P19	N/A	N/A	N/A	N/A	N/A	N/A	The patient with COPD history (FEV1/FVC<0.7)	N/A
P20	2.47	92.4	1.13	56.7	45.89	0.6136364		Salmeterol Xinafoate and Fluticasone Propionate
P21	N/A	N/A	N/A	N/A	N/A	N/A	The patient with COPD history (FEV1/FVC<0.7)	Tiotropium Bromide
P22	N/A	N/A	N/A	N/A	N/A	N/A	The patient with COPD history (FEV1/FVC<0.7)	N/A
P23	72.7	2.79	73.5	1.35	47.5	0.483871		Umeclidinium Bromide and Vilanterol Trifenatate
P24	75.5	1.62	44.8	0.86	32.5	0.5308642		Salmeterol Xinafoate and Fluticasone Propionate
P25	97.3	4.13	101	2.39	76.1	0.5786925		UTIBRON NEOHALER
P26	93.2	3.12	96.2	1.9	77.2	0.6089744		Umeclidinium Bromide and Vilanterol Trifenatate
P27	N/A	N/A	N/A	N/A	N/A	N/A	The patient with COPD history (FEV1/FVC<0.7)	N/A
P28	N/A	N/A	N/A	N/A	N/A	N/A	The patient with COPD history (FEV1/FVC<0.7)	N/A
P29	79.4	1.54	72	1.02	57.9	0.6623377		N/A
P30	66	2.64	66.6	1.55	49	0.5871212		Indacaterol Maleate and Glycopyrronium Bromide
P31	104.5	3.15	107.5	2.11	95.2	0.6698413		N/A
P32	87.8	3.56	90.9	2.44	83.3	0.6853933		N/A
P33	N/A	N/A	N/A	N/A	N/A	N/A	The patient with COPD history (FEV1/FVC<0.7)	SALMETEROL Fluticasone
P34	N/A	N/A	N/A	N/A	N/A	N/A	The patient with COPD history (FEV1/FVC<0.7)	N/A
P35	71.8	2.14	67.2	1.39	57.6	0.6495327		Umeclidinium Bromide and Vilanterol Trifenatate
P36	N/A	N/A	N/A	N/A	N/A	N/A	The patient with COPD history (FEV1/FVC<0.7)	N/A
P37	N/A	N/A	N/A	N/A	N/A	N/A	The patient with COPD history (FEV1/FVC<0.7)	N/A
P38	N/A	N/A	N/A	N/A	N/A	N/A	The patient with COPD history (FEV1/FVC<0.7)	Budesonide and Formoterol Fumarate
P39	N/A	N/A	N/A	N/A	N/A	N/A	The patient with COPD history (FEV1/FVC<0.7)	Spirivaspincap
P40	N/A	N/A	N/A	N/A	N/A	N/A	The patient with COPD history (FEV1/FVC<0.7)	N/A
P41	N/A	N/A	N/A	N/A	N/A	N/A	The patient with COPD history (FEV1/FVC<0.7)	N/A
P42	101.1	2.38	107.1	1.47	80.6	0.6176471		Spirivaspincap
P43	40.8	1.54	42.3	0.87	30.5	0.5649351		Salbutamol Sulphate Aerosol+Spirivaspincap
P44	N/A	N/A	N/A	N/A	N/A	N/A	The patient with COPD history (FEV1/FVC<0.7)	N/A
P45	84	3.07	85.6	1.66	63.2	0.5407166		N/A
P46	N/A	N/A	N/A	N/A	N/A	N/A	The patient with COPD history (FEV1/FVC<0.7)	Budesonide and Formoterol Fumarate
P47	N/A	N/A	N/A	N/A	N/A	N/A	The patient with COPD history (FEV1/FVC<0.7)	Spirivaspincap
P48	N/A	N/A	N/A	N/A	N/A	N/A	The patient with COPD history (FEV1/FVC<0.7)	Budesonide and Formoterol Fumarate
P49	105.8	4.43	109.9	2.84	88.9	0.6410835		N/A
P50	47.4	1.85	47.8	1.18	38.9	0.6378378		N/A
P51	81.9	3.06	84.8	1.7	61.4	0.5555556		N/A

Patient number	VC MAX	FVC	FVC%	FEV1	FEV1%	FEV1/FVC	Notes	COPD treatment
P52	101.2	4.43	102.6	3.51	99.9	0.7923251	The patient no COPD history	N/A
P53	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P54	83.6	4.46	85	3.54	80.8	0.793722	The patient no COPD history	N/A
P55	107.1	1.83	114.1	1.47	94.2	0.8032787	The patient no COPD history	N/A
P56	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P57	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P58	123.5	3.15	127	2.68	127.9	0.8507937	The patient no COPD history	N/A
P59	79.9	3.27	82.9	2.36	75.3	0.7217125	The patient no COPD history	N/A
P60	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P61	73.5	3.23	76	2.35	73.2	0.7275542	The patient no COPD history	N/A
P62	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P63	76.92	2.16	81.8	1.68	75.84	0.7777778	The patient no COPD history	N/A
P64	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P65	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P66	66.2	1.53	69.9	1.27	70.7	0.8300654	The patient no COPD history	N/A
P67	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P68	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P69	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P70	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P71	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P72	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P73	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P74	120.3	4.68	123.1	3.49	119	0.7457265	The patient no COPD history	N/A
P75	142.4	3.37	143.9	2.71	139.7	0.8041543	The patient no COPD history	N/A
P76	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P77	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P78	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P79	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P80	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P81	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P82	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P83	92.6	1.96	98.1	1.44	88.8	0.7346939	The patient no COPD history	N/A
P84	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P85	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P86	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P87	131.9	2.7	130.5	1.99	117.8	0.737037	The patient no COPD history	N/A
P88	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P89	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P90	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P91	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P92	79.4	1.84	81.9	1.61	86	0.875	The patient no COPD history	N/A
P93	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P94	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P95	109.2	2.79	112.6	2.14	102.7	0.7670251	The patient no COPD history	N/A

Patient number	VC MAX	FVC	FVC%	FEV1	FEV1%	FEV1/FVC	Notes	COPD treatment
P96	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P97	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P98	88.4	2.97	91.2	2.48	102	0.8350168	The patient no COPD history	N/A
P99	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P100	99.6	3.37	97.7	2.73	105.5	0.810089	The patient no COPD history	N/A
P101	66.4	2.26	65.6	1.73	58.6	0.7654867	The patient no COPD history	N/A
P102	85.5	2.19	86.4	1.72	81.2	0.7853881	The patient no COPD history	N/A
P103	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P104	92.8	2.42	93.9	1.72	92.9	0.7107438	The patient no COPD history	N/A
P105	N/A	3.08	71.9	4.61	65.2	1.4967532	The patient no COPD history	N/A
P106	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P107	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P108	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P109	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P110	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P111	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P112	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P113	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P114	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P115	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P116	90.7	4.08	94.4	3.08	87.7	0.754902	The patient no COPD history	N/A
P117	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P118	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P119	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P120	99.8	4.86	100.8	3.6	89.3	0.7407407	The patient no COPD history	N/A
P121	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P122	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P123	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P124	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P125	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P126	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P127	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P128	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P129	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P130	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P131	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P132	107.3	2.63	112	2.08	106.6	0.7908745	The patient no COPD history	N/A
P133	99.7	3.07	101.9	2.28	88.8	0.742671	The patient no COPD history	N/A
P134	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P135	92.8	2.75	94.1	2.29	91.9	0.8327273	The patient no COPD history	N/A
P136	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P137	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A
P138	94.4	3.88	97.9	2.79	99.8	0.7190722	The patient no COPD history	N/A
P139	N/A	N/A	N/A	N/A	N/A	N/A	The patient no COPD history	N/A

Note: N/A means not available

Supplementary Table S2. Comparison of serum markers and tumor markers between COPD-LC and Non-COPD-LC in Chinese cohort

Characteristics	COPD-LC	non-COPD-LC	*P* value
Serum markers			
C-reaction protein level(mg/L), median [IQR]	21.8[6.00-54.8]	9.70[5.00-21.1]	*P=0.007*
Albumin level(g/L), median [IQR]	36.0[32.8-41.0]	37.6[35.2-38.9]	*P=0.018*
Monocyte percentage (%), median [IQR]	8.55[7.32-10.0]	7.85[6.65-9.12]	*P=0.028*
Procalcitonin level (pg/mL), median [IQR]	0.050[0.030-0.075]	0.03[0.020-0.060]	*P=0.055*
Interleukin-6 level (pg/mL), median [IQR]	15.9[6.40-29.7]	10.4[4.59-20.7]	*P=0.074*
D dimer level (μg/mL), median [IQR]	0.890[0.682-1.39]	0.960[0.627-2.18]	*P=0.751*
Hemoglobin level (g/L), median [IQR]	136[122-143]	133[125-140]	*P=0.746*
Percentage of lymphocytes (%), median [IQR]	21.6[13.6-30.0]	24.1[17.1-31.2]	*P=0.109*
Neutrophil percentage (%), median [IQR]	67.2[57.5-74.0]	64.6[56.5-70.8]	*P=0.166*
Absolute value of eosinophils (10^9/L), median [IQR]	0.470[0.100-2.27]	0.230[0.110-1.12]	*P=0.706*
Erythrocyte sedimentation rate (%), median [IQR]	15.0[10.0-27.7]	16[8.00-29.0]	*P=0.926*
Tumor markers			
AFP level (ng/mL), median [IQR]	2.37[1.66-3.32]	2.72[1.88-4.23]	*P=0.119*
CEA level (ng/mL), median [IQR]	3.80[2.75-11.9]	4.12[1.95-14.4]	*P=0.514*
CYF level (ng/mL), median [IQR]	9.81[3.22-11.7]	4.43[3.00-8.65]	*P=0.091*
CSE level (ng/mL), median [IQR]	16.9[14.9-21.2]	17.1[14.7-22.1]	*P=0.947*
SCC level (ng/mL), median [IQR]	1.25[0.725-2.40]	0.800[0.600-1.10]	*P<0.001*

Supplementary Table S3. Clinicopathological characteristics of TCGA cohort.

Characteristic	COPD-LC No.of patients(%)	non-COPD-LC No.of patients(%)	P value
Total of patients	69(100)	126(100)	
Age (yr)			*P*= 0.684
Mean±SD	66.68±8.8	65.85±2.83	
Sex-no. (%)			*P* =0.383
Female	30(43)	63(50)	
Male	39(57)	63(50)	
Pathology-no. (%)			
Adenocarcinoma	29(42)	85(67)	*P* =0.001
Squamous-cell carcinoma	40(58)	41(33)	
Stage-no. (%)			*P* =0.154
I	40(58)	81(64)	
II	16(23)	32(25)	
III	10(15)	13(11)	
IV	1(1)	0(0)	
NA	2(3)	0(0)	
Smoking history-no. (%)			
Yes	69(100)	117(93)	*P*= 0.028
No	0(0)	9(7)	

Supplementary Table S4. The mutation frequency and Fisher's exact test of 539 genes between COPD-LC and non-COPD-LC in our Chinese cohort

Gene	COPD_Mut	COPD_Wildtype	nonCOPD_Mut	nonCOPD_Wildtype	COPD Freq(%)	nonCOPD Freq(%)	P-value
TP53	15	6	33	35	71.42857143	48.52941176	0.082176702
LRP1B	9	12	6	62	42.85714286	8.823529412	0.000947273
MUC16	7	14	17	51	33.33333333	25	0.574342966
EPHA5	5	16	1	67	23.80952381	1.470588235	0.00247458
EGFR	4	17	34	34	19.04761905	50	0.013060973
RBM10	4	17	5	63	19.04761905	7.352941176	0.206471478
FAT1	3	18	0	68	14.28571429	0	0.011711458
PREX2	3	18	0	68	14.28571429	0	0.011711458
PDGFRA	3	18	0	68	14.28571429	0	0.011711458
MET	3	18	0	68	14.28571429	0	0.011711458
PRKDC	3	18	1	67	14.28571429	1.470588235	0.039492125
MSH6	3	18	2	66	14.28571429	2.941176471	0.083287531
PIK3C2B	3	18	2	66	14.28571429	2.941176471	0.083287531
ATR	3	18	2	66	14.28571429	2.941176471	0.083287531
SPTA1	3	18	2	66	14.28571429	2.941176471	0.083287531
ERBB4	3	18	3	65	14.28571429	4.411764706	0.140638656
FAT3	3	18	3	65	14.28571429	4.411764706	0.140638656
CREBBP	3	18	5	63	14.28571429	7.352941176	0.38628858
EPHA3	2	19	0	68	9.523809524	0	0.053626149
IL7R	2	19	0	68	9.523809524	0	0.053626149
PTPRB	2	19	0	68	9.523809524	0	0.053626149
FGF14	2	19	0	68	9.523809524	0	0.053626149
CUL4A	2	19	0	68	9.523809524	0	0.053626149
ERCC2	2	19	0	68	9.523809524	0	0.053626149
RAD50	2	19	0	68	9.523809524	0	0.053626149
SMARCA4	2	19	0	68	9.523809524	0	0.053626149
EP300	2	19	0	68	9.523809524	0	0.053626149
PPARG	2	19	0	68	9.523809524	0	0.053626149
TGFBR2	2	19	0	68	9.523809524	0	0.053626149
NOTCH4	2	19	0	68	9.523809524	0	0.053626149
SMARCC1	2	19	0	68	9.523809524	0	0.053626149
TET2	2	19	0	68	9.523809524	0	0.053626149
BRCA1	2	19	1	67	9.523809524	1.470588235	0.137455532
MTOR	2	19	1	67	9.523809524	1.470588235	0.137455532
KDM5A	2	19	1	67	9.523809524	1.470588235	0.137455532
ROS1	2	19	1	67	9.523809524	1.470588235	0.137455532
STAT6	2	19	1	67	9.523809524	1.470588235	0.137455532
JAK3	2	19	1	67	9.523809524	1.470588235	0.137455532
STK11	2	19	1	67	9.523809524	1.470588235	0.137455532
NOTCH2	2	19	1	67	9.523809524	1.470588235	0.137455532
SMARCA2	2	19	2	66	9.523809524	2.941176471	0.235418938
IGFN1	2	19	2	66	9.523809524	2.941176471	0.235418938
NFE2L2	2	19	2	66	9.523809524	2.941176471	0.235418938
ARID1A	2	19	2	66	9.523809524	2.941176471	0.235418938
ALK	2	19	2	66	9.523809524	2.941176471	0.235418938
NOTCH3	2	19	2	66	9.523809524	2.941176471	0.235418938
SETD2	2	19	2	66	9.523809524	2.941176471	0.235418938
KEAP1	2	19	3	65	9.523809524	4.411764706	0.587977438
IRS2	2	19	3	65	9.523809524	4.411764706	0.587977438
FAT2	2	19	3	65	9.523809524	4.411764706	0.587977438
RB1	2	19	3	65	9.523809524	4.411764706	0.587977438
POLE	2	19	3	65	9.523809524	4.411764706	0.587977438
BRCA2	2	19	3	65	9.523809524	4.411764706	0.587977438
GRIN2A	2	19	3	65	9.523809524	4.411764706	0.587977438
PIK3CA	2	19	7	61	9.523809524	10.29411765	1
FUBP1	1	20	0	68	4.761904762	0	0.235955056
EPAS1	1	20	0	68	4.761904762	0	0.235955056
KIT	1	20	0	68	4.761904762	0	0.235955056
HGF	1	20	0	68	4.761904762	0	0.235955056
FOXO1	1	20	0	68	4.761904762	0	0.235955056
AXL	1	20	0	68	4.761904762	0	0.235955056
NT5C2	1	20	0	68	4.761904762	0	0.235955056
BRIP1	1	20	0	68	4.761904762	0	0.235955056
EML4	1	20	0	68	4.761904762	0	0.235955056
RAC1	1	20	0	68	4.761904762	0	0.235955056
TEK	1	20	0	68	4.761904762	0	0.235955056
PTCH1	1	20	0	68	4.761904762	0	0.235955056
ARID5B	1	20	0	68	4.761904762	0	0.235955056
CIITA	1	20	0	68	4.761904762	0	0.235955056

Gene	COPD_Mut	COPD_Wildtype	nonCOPD_Mut	nonCOPD_Wildtype	COPD Freq(%)	nonCOPD Freq(%)	P-value
SPEN	1	20	0	68	4.761904762	0	0.235955056
CHD4	1	20	0	68	4.761904762	0	0.235955056
CYP19A1	1	20	0	68	4.761904762	0	0.235955056
CYLD	1	20	0	68	4.761904762	0	0.235955056
RAD51C	1	20	0	68	4.761904762	0	0.235955056
RUNX1	1	20	0	68	4.761904762	0	0.235955056
FOXP1	1	20	0	68	4.761904762	0	0.235955056
FGFR4	1	20	0	68	4.761904762	0	0.235955056
GNAQ	1	20	0	68	4.761904762	0	0.235955056
PIGR	1	20	0	68	4.761904762	0	0.235955056
PTPRO	1	20	0	68	4.761904762	0	0.235955056
MPL	1	20	0	68	4.761904762	0	0.235955056
FGA	1	20	0	68	4.761904762	0	0.235955056
EXT1	1	20	0	68	4.761904762	0	0.235955056
MUTYH	1	20	0	68	4.761904762	0	0.235955056
CBFB	1	20	0	68	4.761904762	0	0.235955056
CYP2E1	1	20	0	68	4.761904762	0	0.235955056
FGF6	1	20	0	68	4.761904762	0	0.235955056
DICER1	1	20	0	68	4.761904762	0	0.235955056
SDHD	1	20	0	68	4.761904762	0	0.235955056
TSC2	1	20	0	68	4.761904762	0	0.235955056
SPOP	1	20	0	68	4.761904762	0	0.235955056
AURKB	1	20	0	68	4.761904762	0	0.235955056
TOP1	1	20	0	68	4.761904762	0	0.235955056
IFNGR2	1	20	0	68	4.761904762	0	0.235955056
PARP3	1	20	0	68	4.761904762	0	0.235955056
FANCG	1	20	0	68	4.761904762	0	0.235955056
BTK	1	20	0	68	4.761904762	0	0.235955056
U2AF1	1	20	0	68	4.761904762	0	0.235955056
CASP8	1	20	0	68	4.761904762	0	0.235955056
GATA2	1	20	0	68	4.761904762	0	0.235955056
CDC73	1	20	0	68	4.761904762	0	0.235955056
LTK	1	20	0	68	4.761904762	0	0.235955056
SLX4	1	20	0	68	4.761904762	0	0.235955056
PLCG2	1	20	0	68	4.761904762	0	0.235955056
SERPINB3	1	20	0	68	4.761904762	0	0.235955056
ERCC3	1	20	0	68	4.761904762	0	0.235955056
PMS1	1	20	0	68	4.761904762	0	0.235955056
PHOX2B	1	20	0	68	4.761904762	0	0.235955056
MSH3	1	20	0	68	4.761904762	0	0.235955056
STAG2	1	20	0	68	4.761904762	0	0.235955056
KDR	1	20	0	68	4.761904762	0	0.235955056
MAF	1	20	0	68	4.761904762	0	0.235955056
FLT3	1	20	0	68	4.761904762	0	0.235955056
SMO	1	20	0	68	4.761904762	0	0.235955056
CTNNA1	1	20	0	68	4.761904762	0	0.235955056
IL6ST	1	20	1	67	4.761904762	1.470588235	0.418283963
HDAC1	1	20	1	67	4.761904762	1.470588235	0.418283963
ABL1	1	20	1	67	4.761904762	1.470588235	0.418283963
FLT4	1	20	1	67	4.761904762	1.470588235	0.418283963
DDR2	1	20	1	67	4.761904762	1.470588235	0.418283963
PIK3R2	1	20	1	67	4.761904762	1.470588235	0.418283963
NKX3-1	1	20	1	67	4.761904762	1.470588235	0.418283963
ZNF703	1	20	1	67	4.761904762	1.470588235	0.418283963
JAK2	1	20	1	67	4.761904762	1.470588235	0.418283963
FAT4	1	20	1	67	4.761904762	1.470588235	0.418283963
RARA	1	20	1	67	4.761904762	1.470588235	0.418283963
ABCB1	1	20	1	67	4.761904762	1.470588235	0.418283963
ATG2A	1	20	1	67	4.761904762	1.470588235	0.418283963
ARID1B	1	20	1	67	4.761904762	1.470588235	0.418283963
SMARCA1	1	20	1	67	4.761904762	1.470588235	0.418283963
INSR	1	20	1	67	4.761904762	1.470588235	0.418283963
HUWE1	1	20	1	67	4.761904762	1.470588235	0.418283963
ATM	1	20	2	66	4.761904762	2.941176471	0.558698179
APLNR	1	20	1	67	4.761904762	1.470588235	0.418283963

Gene	COPD_Mut	COPD_Wildtype	nonCOPD_Mut	nonCOPD_Wildtype	COPD Freq(%)	nonCOPD Freq(%)	P-value
MAP3K13	1	20	2	66	4.761904762	2.941176471	0.558698179
AR	1	20	2	66	4.761904762	2.941176471	0.558698179
DNMT1	1	20	2	66	4.761904762	2.941176471	0.558698179
NTRK1	1	20	2	66	4.761904762	2.941176471	0.558698179
UGT1A1	1	20	2	66	4.761904762	2.941176471	0.558698179
A2M	1	20	2	66	4.761904762	2.941176471	0.558698179
EMSY	1	20	2	66	4.761904762	2.941176471	0.558698179
ERBB2	1	20	2	66	4.761904762	2.941176471	0.558698179
GATA6	1	20	2	66	4.761904762	2.941176471	0.558698179
NSD1	1	20	2	66	4.761904762	2.941176471	0.558698179
GLI1	1	20	2	66	4.761904762	2.941176471	0.558698179
PAK5	1	20	2	66	4.761904762	2.941176471	0.558698179
BCORL1	1	20	2	66	4.761904762	2.941176471	0.558698179
PIK3CG	1	20	2	66	4.761904762	2.941176471	0.558698179
MST1R	1	20	2	66	4.761904762	2.941176471	0.558698179
NTRK2	1	20	4	64	4.761904762	5.882352941	1
ARID2	1	20	5	63	4.761904762	7.352941176	1
PTEN	1	20	5	63	4.761904762	7.352941176	1
GNAS	1	20	3	65	4.761904762	4.411764706	1
KMT2C	1	20	4	64	4.761904762	5.882352941	1
NCOR1	1	20	3	65	4.761904762	4.411764706	1
NOTCH1	1	20	4	64	4.761904762	5.882352941	1
NTRK3	1	20	3	65	4.761904762	4.411764706	1
KDM5C	1	20	5	63	4.761904762	7.352941176	1
CIC	1	20	3	65	4.761904762	4.411764706	1
CDKN2A	1	20	5	63	4.761904762	7.352941176	1
PTPRD	1	20	5	63	4.761904762	7.352941176	1
KRAS	1	20	5	63	4.761904762	7.352941176	1
APC	1	20	5	63	4.761904762	7.352941176	1
CTNNB1	0	21	8	60	0	11.76470588	0.18998358
GRM3	0	21	6	62	0	8.823529412	0.328991828
SMAD4	0	21	4	64	0	5.882352941	0.568961012
INPP4B	0	21	2	66	0	2.941176471	1
IDH2	0	21	1	67	0	1.470588235	1
ERG	0	21	1	67	0	1.470588235	1
MAP2K1	0	21	1	67	0	1.470588235	1
ZNF217	0	21	1	67	0	1.470588235	1
TET1	0	21	2	66	0	2.941176471	1
SMAD3	0	21	1	67	0	1.470588235	1
PLK1	0	21	2	66	0	2.941176471	1
BCOR	0	21	3	65	0	4.411764706	1
STAT5B	0	21	1	67	0	1.470588235	1
FANCD2	0	21	1	67	0	1.470588235	1
CD79A	0	21	1	67	0	1.470588235	1
EZH2	0	21	1	67	0	1.470588235	1
FOXA1	0	21	2	66	0	2.941176471	1
TSHR	0	21	2	66	0	2.941176471	1
ATRX	0	21	2	66	0	2.941176471	1
CALR	0	21	1	67	0	1.470588235	1
TGFBR1	0	21	1	67	0	1.470588235	1
RECQL4	0	21	1	67	0	1.470588235	1
CDK8	0	21	1	67	0	1.470588235	1
KLHL6	0	21	1	67	0	1.470588235	1
BCL6	0	21	1	67	0	1.470588235	1
GATA1	0	21	1	67	0	1.470588235	1
NF1	0	21	1	67	0	1.470588235	1
P2RY8	0	21	2	66	0	2.941176471	1
TRAF7	0	21	1	67	0	1.470588235	1
RAD21	0	21	1	67	0	1.470588235	1
RPS6KA3	0	21	1	67	0	1.470588235	1
MERTK	0	21	1	67	0	1.470588235	1
XPO1	0	21	3	65	0	4.411764706	1
IRF2	0	21	1	67	0	1.470588235	1
CCNE1	0	21	1	67	0	1.470588235	1
FANCC	0	21	1	67	0	1.470588235	1
IFNGR1	0	21	1	67	0	1.470588235	1
CARD11	0	21	2	66	0	2.941176471	1
H3F3C	0	21	1	67	0	1.470588235	1
TERT	0	21	2	66	0	2.941176471	1
B2M	0	21	2	66	0	2.941176471	1
PAK3	0	21	2	66	0	2.941176471	1
RXRA	0	21	1	67	0	1.470588235	1
ACTL6A	0	21	1	67	0	1.470588235	1
HIST1H3B	0	21	1	67	0	1.470588235	1
YES1	0	21	1	67	0	1.470588235	1

Gene	COPD_Mut	COPD_Wildtype	nonCOPD_Mut	nonCOPD_Wildtype	COPD Freq(%)	nonCOPD Freq(%)	P-value
SOS1	0	21	1	67	0	1.470588235	1
DOT1L	0	21	1	67	0	1.470588235	1
SF3B1	0	21	3	65	0	4.411764706	1
RAD54L	0	21	1	67	0	1.470588235	1
MAP3K1	0	21	1	67	0	1.470588235	1
AKT1	0	21	1	67	0	1.470588235	1
VEGFB	0	21	1	67	0	1.470588235	1
PIK3C2G	0	21	1	67	0	1.470588235	1
HIST1H1C	0	21	1	67	0	1.470588235	1
DIS3	0	21	2	66	0	2.941176471	1
RICTOR	0	21	1	67	0	1.470588235	1
THADA	0	21	3	65	0	4.411764706	1
PMS2	0	21	1	67	0	1.470588235	1
EPHB1	0	21	3	65	0	4.411764706	1
BUB1B	0	21	1	67	0	1.470588235	1
BRAF	0	21	1	67	0	1.470588235	1
MYCN	0	21	1	67	0	1.470588235	1
TP63	0	21	2	66	0	2.941176471	1
STAT2	0	21	1	67	0	1.470588235	1
ACVR2A	0	21	2	66	0	2.941176471	1
FGF12	0	21	1	67	0	1.470588235	1
CDKN1C	0	21	1	67	0	1.470588235	1
PDGFRB	0	21	1	67	0	1.470588235	1
PPP2R1A	0	21	1	67	0	1.470588235	1
SDHB	0	21	2	66	0	2.941176471	1
SMARCC2	0	21	1	67	0	1.470588235	1
CSF1R	0	21	2	66	0	2.941176471	1
STAT3	0	21	2	66	0	2.941176471	1
SMARCE1	0	21	1	67	0	1.470588235	1
FH	0	21	2	66	0	2.941176471	1
TBX3	0	21	1	67	0	1.470588235	1
TFG	0	21	1	67	0	1.470588235	1
PIK3CB	0	21	1	67	0	1.470588235	1
EPHA2	0	21	1	67	0	1.470588235	1
POLD1	0	21	1	67	0	1.470588235	1
SGK1	0	21	1	67	0	1.470588235	1
PARP2	0	21	1	67	0	1.470588235	1
TNFRSF14	0	21	1	67	0	1.470588235	1
MED12	0	21	2	66	0	2.941176471	1
BRD4	0	21	1	67	0	1.470588235	1
FLT1	0	21	1	67	0	1.470588235	1
CDKN1A	0	21	1	67	0	1.470588235	1
HIST1H3D	0	21	1	67	0	1.470588235	1
FBXW7	0	21	1	67	0	1.470588235	1
EPHA7	0	21	2	66	0	2.941176471	1
MLH1	0	21	1	67	0	1.470588235	1
PALB2	0	21	1	67	0	1.470588235	1
RHOA	0	21	1	67	0	1.470588235	1
RNF43	0	21	1	67	0	1.470588235	1
EPCAM	0	21	1	67	0	1.470588235	1
ETV1	0	21	1	67	0	1.470588235	1
FGFR2	0	21	1	67	0	1.470588235	1
TSC1	0	21	1	67	0	1.470588235	1
GABRA6	0	21	1	67	0	1.470588235	1
SOX17	0	21	1	67	0	1.470588235	1
DDR1	0	21	2	66	0	2.941176471	1
VTCN1	0	21	1	67	0	1.470588235	1
STAT1	0	21	1	67	0	1.470588235	1
CBL	0	21	2	66	0	2.941176471	1
FYN	0	21	1	67	0	1.470588235	1
ASXL1	0	21	1	67	0	1.470588235	1
DNMT3A	0	21	1	67	0	1.470588235	1
MAP2K4	0	21	1	67	0	1.470588235	1
EPHB4	0	21	1	67	0	1.470588235	1
PRKAR1A	0	21	1	67	0	1.470588235	1
NF2	0	21	2	66	0	2.941176471	1
MDM2	0	21	1	67	0	1.470588235	1
PBRM1	0	21	1	67	0	1.470588235	1
HRAS	0	21	1	67	0	1.470588235	1
CHEK2	0	21	1	67	0	1.470588235	1
PIK3C3	0	21	1	67	0	1.470588235	1
BAP1	0	21	1	67	0	1.470588235	1
IL6R	0	21	1	67	0	1.470588235	1
CUL3	0	21	1	67	0	1.470588235	1
ARFRP1	0	21	1	67	0	1.470588235	1
MAPK1	0	21	1	67	0	1.470588235	1
RET	0	21	1	67	0	1.470588235	1
KDM6A	0	21	1	67	0	1.470588235	1
CD74	0	21	1	67	0	1.470588235	1
FLCN	0	21	1	67	0	1.470588235	1
VEGFA	0	21	1	67	0	1.470588235	1
ACVR1B	0	21	1	67	0	1.470588235	1

Supplementary Table S5. Clinicopathological information of EGFR-TKI treated patients

Characteristic	COPD No.of patients	non-COPD No.of patients	P value
Total of patients	7(100)	20(100)	
Age -no.(%)			*P=0.137*
<65(reference)	0(0)	7(35)	
>=65	7(100)	13(65)	
Sex-no.(%)			*P=0.209*
Male	5(71)	8(40)	
Female	2(29)	12(60)	
Histologic diagnosis — no. (%)			*P* =1
Adenocarcinoma	7(100)	19(95)	
Squamous-cell carcinoma	0(0)	1(5)	
Clinical disease stage — no. (%)			*P* =1
III	0(0)	2(10)	
IV	7(100)	18(90)	
Smoking history— no. (%)			*P*= 1
Yes	2(29)	7(35)	
No	5(71)	13(65)	
TP53 comutation—no. (%)			*P=1*
Yes	4(57)	11(55)	
No	3(43)	9(45)	

Supplementary Table S6. Detailed information of EGFR-TKI treated patients

Patient number	Group	Diagnostic time	Treatment	Recurrence/last follow time	PFS(weeks)	PFS Status at Last Follow-up
P42	COPD	2020/4/6	Gefitinib	2020/9/5	21.7	1
P20	COPD	2021/2/9	Osimertinib	2021/4/13	9.0	1
P14	COPD	2020/3/9	Gefitinib	2020/11/19	34.6	1
P7	COPD	2019/6/6	Gefitinib	2020/10/11	17.0	1
P2	COPD	2019/9/11	Gefitinib	2019/9/21	1.4	1
P19	COPD	2021/3/10	Osimertinib	2021/5/19	7.4	0
P11	COPD	2017/4/5	Gefitinib	2018/3/14	49.0	1
P108	Non-COPD	2019/10/20	Gefitinib	2020/3/24	22.3	1
P107	Non-COPD	2019/11/12	Gefitinib	2020/6/15	30.9	1
P102	Non-COPD	2020/1/6	Gefitinib	2021/3/16	58.7	1
P100	Non-COPD	2020/3/5	Gefitinib	2021/2/3	47.9	1
P95	Non-COPD	2020/5/22	Erlotinib	2021/5/15	51.1	1
P138	Non-COPD	2020/7/9	Gefitinib	2020/12/22	23.7	1
P79	Non-COPD	2020/10/17	Osimertinib	2021/6/20	29.7	1
P139	Non-COPD	2020/11/15	Erlotinib	2021/3/11	16.6	1
P66	Non-COPD	2021/1/22	Icotinib	2021/8/1	22.4	0
P52	Non-COPD	2019/7/30	Osimertinib	2019/12/19	18.1	1
P106	Non-COPD	2019/12/2	Gefitinib	2021/6/16	80.3	1
P133	Non-COPD	2020/3/19	Gefitinib	2021/8/1	71.4	1
P104	Non-COPD	2020/1/11	Gefitinib	2021/8/1	73.1	0
P97	Non-COPD	2020/5/9	Afatinib	2021/8/1	64.1	0
P94	Non-COPD	2020/5/16	Icotinib	2021/8/1	60.7	0
P77	Non-COPD	2020/11/16	Icotinib	2021/8/1	37.7	0
P72	Non-COPD	2021/1/8	Osimertinib	2021/5/10	9.7	1
P131	Non-COPD	2019/9/15	Gefitinib	2020/3/15	21.7	1
P123	Non-COPD	2019/10/5	Gefitinib	2020/9/15	48.0	1
P134	Non-COPD	2019/11/12	Osimertinib	2021/8/1	89.7	0

Supplementary Table S7. The mutation frequency and Fisher's exact test of 539 genes between COPD-LC and non-COPD-LC in TCGA cohort.

Gene	COPD_Mut	COPD_Wildtype	nonCOPD_Mut	nonCOPD_Wildtype	COPD Freq(%)	nonCOPD Freq(%)	P-value
IKZF1	4	65	0	126	5.797101449	0	0.014800687
MLH1	4	65	0	126	5.797101449	0	0.014800687
GATA1	5	64	1	125	7.246376812	0.793650794	0.021738126
EPHB1	8	61	4	122	11.5942029	3.174603175	0.027870486
NFE2L2	9	60	5	121	13.04347826	3.968253968	0.038001177
CYP2C19	3	66	0	126	4.347826087	0	0.043056543
EED	3	66	0	126	4.347826087	0	0.043056543
PTPN11	3	66	0	126	4.347826087	0	0.043056543
TEK	3	66	0	126	4.347826087	0	0.043056543
GRIN2A	9	60	6	120	13.04347826	4.761904762	0.049562403
EP300	4	65	1	125	5.797101449	0.793650794	0.053855902
FBXW7	4	65	1	125	5.797101449	0.793650794	0.053855902
PIK3CG	10	59	7	119	14.49275362	5.555555556	0.059736356
ARID1B	8	61	5	121	11.5942029	3.968253968	0.067567478
ATG2A	6	63	3	123	8.695652174	2.380952381	0.069880307
XPO1	0	69	6	120	0	4.761904762	0.091444214
BRAF	1	68	10	116	1.449275362	7.936507937	0.100678206
EGFR	1	68	10	116	1.449275362	7.936507937	0.100678206
INHBA	1	68	9	117	1.449275362	7.142857143	0.101198855
TET1	1	68	9	117	1.449275362	7.142857143	0.101198855
EPHA3	9	60	8	118	13.04347826	6.349206349	0.120637532
CALR	2	67	0	126	2.898550725	0	0.124028549
CBFB	2	67	0	126	2.898550725	0	0.124028549
FGFR3	2	67	0	126	2.898550725	0	0.124028549
IGF1R	2	67	0	126	2.898550725	0	0.124028549
IKBKE	2	67	0	126	2.898550725	0	0.124028549
KLF4	2	67	0	126	2.898550725	0	0.124028549
MCL1	2	67	0	126	2.898550725	0	0.124028549
NTHL1	2	67	0	126	2.898550725	0	0.124028549
PHOX2B	2	67	0	126	2.898550725	0	0.124028549
RNF43	2	67	0	126	2.898550725	0	0.124028549
RXRA	2	67	0	126	2.898550725	0	0.124028549
VTCN1	2	67	0	126	2.898550725	0	0.124028549
DOT1L	3	66	1	125	4.347826087	0.793650794	0.127824112
FGFR4	3	66	1	125	4.347826087	0.793650794	0.127824112
NBN	3	66	1	125	4.347826087	0.793650794	0.127824112
YES1	3	66	1	125	4.347826087	0.793650794	0.127824112
A2M	5	64	3	123	7.246376812	2.380952381	0.133888454
NTRK3	8	61	7	119	11.5942029	5.555555556	0.161715575
PAX5	0	69	5	121	0	3.968253968	0.163311742
TP63	0	69	5	121	0	3.968253968	0.163311742
MUC16	36	33	53	73	52.17391304	42.06349206	0.180471171
JAK3	4	65	2	124	5.797101449	1.587301587	0.18779754
NTRK1	4	65	2	124	5.797101449	1.587301587	0.18779754
PTCH1	4	65	2	124	5.797101449	1.587301587	0.18779754
ZNF217	4	65	2	124	5.797101449	1.587301587	0.18779754
TP53	47	22	74	52	68.11594203	58.73015873	0.219263662
CDKN2A	7	62	6	120	10.14492754	4.761904762	0.227834671
DNMT3A	4	65	3	123	5.797101449	2.380952381	0.246637204
GRM3	4	65	3	123	5.797101449	2.380952381	0.246637204
SMARCA1	4	65	3	123	5.797101449	2.380952381	0.246637204
SPEN	4	65	3	123	5.797101449	2.380952381	0.246637204
BRIP1	1	68	7	119	1.449275362	5.555555556	0.263836987
GNAS	1	68	7	119	1.449275362	5.555555556	0.263836987
IGFN1	1	68	7	119	1.449275362	5.555555556	0.263836987
SERPINB4	1	68	7	119	1.449275362	5.555555556	0.263836987
SF3B1	1	68	7	119	1.449275362	5.555555556	0.263836987
FLT1	8	61	8	118	11.5942029	6.349206349	0.274505038
DAPK1	5	64	4	122	7.246376812	3.174603175	0.28367214
GABRA6	5	64	4	122	7.246376812	3.174603175	0.28367214
PIK3C2G	5	64	4	122	7.246376812	3.174603175	0.28367214
ATG13	2	67	1	125	2.898550725	0.793650794	0.285972561
BRD4	2	67	1	125	2.898550725	0.793650794	0.285972561
C10orf11	2	67	1	125	2.898550725	0.793650794	0.285972561
CTNNB1	2	67	1	125	2.898550725	0.793650794	0.285972561
CUL4A	2	67	1	125	2.898550725	0.793650794	0.285972561
FGFR1	2	67	1	125	2.898550725	0.793650794	0.285972561

Gene	COPD_Mut	COPD_Wildtype	nonCOPD_Mut	nonCOPD_Wildtype	COPD Freq(%)	nonCOPD Freq(%)	P-value
HIST1H1C	2	67	1	125	2.898550725	0.793650794	0.285972561
MAP2K1	2	67	1	125	2.898550725	0.793650794	0.285972561
MITF	2	67	1	125	2.898550725	0.793650794	0.285972561
MSH3	2	67	1	125	2.898550725	0.793650794	0.285972561
NOTCH3	2	67	1	125	2.898550725	0.793650794	0.285972561
RAD21	2	67	1	125	2.898550725	0.793650794	0.285972561
RAD51B	2	67	1	125	2.898550725	0.793650794	0.285972561
SDHA	2	67	1	125	2.898550725	0.793650794	0.285972561
SMARCC1	2	67	1	125	2.898550725	0.793650794	0.285972561
STAT4	2	67	1	125	2.898550725	0.793650794	0.285972561
TGFBR1	2	67	1	125	2.898550725	0.793650794	0.285972561
WNT10A	2	67	1	125	2.898550725	0.793650794	0.285972561
DDR1	0	69	4	122	0	3.174603175	0.299185304
EXT2	0	69	4	122	0	3.174603175	0.299185304
GATA3	0	69	4	122	0	3.174603175	0.299185304
PAK3	0	69	4	122	0	3.174603175	0.299185304
PRSS1	0	69	4	122	0	3.174603175	0.299185304
SOX9	0	69	4	122	0	3.174603175	0.299185304
TNFAIP3	0	69	4	122	0	3.174603175	0.299185304
TSHR	0	69	4	122	0	3.174603175	0.299185304
PDGFRA	8	61	9	117	11.5942029	7.142857143	0.300227698
ATM	5	64	5	121	7.246376812	3.968253968	0.328869182
INSR	5	64	5	121	7.246376812	3.968253968	0.328869182
LATS1	5	64	5	121	7.246376812	3.968253968	0.328869182
RBM10	5	64	5	121	7.246376812	3.968253968	0.328869182
PTPRB	10	59	12	114	14.49275362	9.523809524	0.345697192
ACVR1B	3	66	2	124	4.347826087	1.587301587	0.348232267
ASXL1	3	66	2	124	4.347826087	1.587301587	0.348232267
CSF1R	3	66	2	124	4.347826087	1.587301587	0.348232267
CUL3	3	66	2	124	4.347826087	1.587301587	0.348232267
EPHA2	3	66	2	124	4.347826087	1.587301587	0.348232267
NRAS	3	66	2	124	4.347826087	1.587301587	0.348232267
SH2D1A	3	66	2	124	4.347826087	1.587301587	0.348232267
TSC2	3	66	2	124	4.347826087	1.587301587	0.348232267
PRKDC	6	63	6	120	8.695652174	4.761904762	0.351523176
AKT1	1	68	0	126	1.449275362	0	0.353846154
AURKA	1	68	0	126	1.449275362	0	0.353846154
AURKB	1	68	0	126	1.449275362	0	0.353846154
AXIN2	1	68	0	126	1.449275362	0	0.353846154
AXL	1	68	0	126	1.449275362	0	0.353846154
BCL2L11	1	68	0	126	1.449275362	0	0.353846154
CCND1	1	68	0	126	1.449275362	0	0.353846154
CCND3	1	68	0	126	1.449275362	0	0.353846154
CD274	1	68	0	126	1.449275362	0	0.353846154
CD79A	1	68	0	126	1.449275362	0	0.353846154
CD79B	1	68	0	126	1.449275362	0	0.353846154
CDK6	1	68	0	126	1.449275362	0	0.353846154
CFHR1	1	68	0	126	1.449275362	0	0.353846154
CIITA	1	68	0	126	1.449275362	0	0.353846154
CRKL	1	68	0	126	1.449275362	0	0.353846154
CTLA4	1	68	0	126	1.449275362	0	0.353846154
CYP17A1	1	68	0	126	1.449275362	0	0.353846154
DHFR	1	68	0	126	1.449275362	0	0.353846154
ERCC3	1	68	0	126	1.449275362	0	0.353846154
FZR1	1	68	0	126	1.449275362	0	0.353846154
H3F3C	1	68	0	126	1.449275362	0	0.353846154
HIST2H3D	1	68	0	126	1.449275362	0	0.353846154
HNF1B	1	68	0	126	1.449275362	0	0.353846154
IDH1	1	68	0	126	1.449275362	0	0.353846154
IGF2	1	68	0	126	1.449275362	0	0.353846154
IRS2	1	68	0	126	1.449275362	0	0.353846154
MAF	1	68	0	126	1.449275362	0	0.353846154
MAX	1	68	0	126	1.449275362	0	0.353846154
MKNK1	1	68	0	126	1.449275362	0	0.353846154
PIGR	1	68	0	126	1.449275362	0	0.353846154
QKI	1	68	0	126	1.449275362	0	0.353846154
REL	1	68	0	126	1.449275362	0	0.353846154
SDC4	1	68	0	126	1.449275362	0	0.353846154
SOD2	1	68	0	126	1.449275362	0	0.353846154

Gene	COPD_Mut	COPD_Wildtype	nonCOPD_Mut	nonCOPD_Wildtype	COPD Freq(%)	nonCOPD Freq(%)	P-value
SOX17	1	68	0	126	1.449275362	0	0.353846154
SPOP	1	68	0	126	1.449275362	0	0.353846154
SYK	1	68	0	126	1.449275362	0	0.353846154
TMEM173	1	68	0	126	1.449275362	0	0.353846154
TOP1	1	68	0	126	1.449275362	0	0.353846154
U2AF1	1	68	0	126	1.449275362	0	0.353846154
WNT7B	1	68	0	126	1.449275362	0	0.353846154
ZNF703	1	68	0	126	1.449275362	0	0.353846154
PREX2	3	66	11	115	4.347826087	8.73015873	0.38583059
KEAP1	13	56	18	108	18.84057971	14.28571429	0.41868487
FLT3	1	68	6	120	1.449275362	4.761904762	0.424774984
INPP4B	1	68	6	120	1.449275362	4.761904762	0.424774984
PALB2	1	68	6	120	1.449275362	4.761904762	0.424774984
CDC73	1	68	5	121	1.449275362	3.968253968	0.426296055
ERBB2	1	68	5	121	1.449275362	3.968253968	0.426296055
GLI1	1	68	5	121	1.449275362	3.968253968	0.426296055
IRS1	1	68	5	121	1.449275362	3.968253968	0.426296055
KLHL6	1	68	5	121	1.449275362	3.968253968	0.426296055
SETD2	1	68	5	121	1.449275362	3.968253968	0.426296055
TYRO3	1	68	5	121	1.449275362	3.968253968	0.426296055
WRN	1	68	5	121	1.449275362	3.968253968	0.426296055
ATR	4	65	4	122	5.797101449	3.174603175	0.456847353
KRAS	12	57	29	97	17.39130435	23.01587302	0.462603006
ALK	5	64	6	120	7.246376812	4.761904762	0.523682548
APC	5	64	6	120	7.246376812	4.761904762	0.523682548
PIK3CA	5	64	6	120	7.246376812	4.761904762	0.523682548
ROS1	5	64	6	120	7.246376812	4.761904762	0.523682548
ACVR2A	0	69	2	124	0	1.587301587	0.54036479
AKT2	0	69	2	124	0	1.587301587	0.54036479
BAP1	0	69	2	124	0	1.587301587	0.54036479
BARD1	0	69	2	124	0	1.587301587	0.54036479
BCL10	0	69	2	124	0	1.587301587	0.54036479
BMPR1A	0	69	2	124	0	1.587301587	0.54036479
ESR1	0	69	2	124	0	1.587301587	0.54036479
EZH2	0	69	2	124	0	1.587301587	0.54036479
FUBP1	0	69	2	124	0	1.587301587	0.54036479
GSK3B	0	69	2	124	0	1.587301587	0.54036479
HDAC1	0	69	2	124	0	1.587301587	0.54036479
HDAC2	0	69	2	124	0	1.587301587	0.54036479
HLA-DQB1	0	69	2	124	0	1.587301587	0.54036479
HRAS	0	69	2	124	0	1.587301587	0.54036479
LIG3	0	69	2	124	0	1.587301587	0.54036479
P2RY8	0	69	2	124	0	1.587301587	0.54036479
PRDM1	0	69	2	124	0	1.587301587	0.54036479
RAD54L	0	69	2	124	0	1.587301587	0.54036479
RAF1	0	69	2	124	0	1.587301587	0.54036479
RHOA	0	69	2	124	0	1.587301587	0.54036479
SERPINB3	0	69	2	124	0	1.587301587	0.54036479
SMAD3	0	69	2	124	0	1.587301587	0.54036479
XPC	0	69	2	124	0	1.587301587	0.54036479
MTOR	3	66	9	117	4.347826087	7.142857143	0.544618899
BCORL1	6	63	7	119	8.695652174	5.555555556	0.549251058
ABL1	0	69	3	123	0	2.380952381	0.553463203
BAK1	0	69	3	123	0	2.380952381	0.553463203
BLM	0	69	3	123	0	2.380952381	0.553463203
CASP8	0	69	3	123	0	2.380952381	0.553463203
CCND2	0	69	3	123	0	2.380952381	0.553463203
CSF3R	0	69	3	123	0	2.380952381	0.553463203
CTNNA1	0	69	3	123	0	2.380952381	0.553463203
EXT1	0	69	3	123	0	2.380952381	0.553463203
GATA2	0	69	3	123	0	2.380952381	0.553463203
HIST1H3D	0	69	3	123	0	2.380952381	0.553463203
HLA-A	0	69	3	123	0	2.380952381	0.553463203
MEN1	0	69	3	123	0	2.380952381	0.553463203
NPM1	0	69	3	123	0	2.380952381	0.553463203
SRSF2	0	69	3	123	0	2.380952381	0.553463203
STAT2	0	69	3	123	0	2.380952381	0.553463203
STAT3	0	69	3	123	0	2.380952381	0.553463203
TCF7L2	0	69	3	123	0	2.380952381	0.553463203
TRAF7	0	69	3	123	0	2.380952381	0.553463203

Gene	COPD_Mut	COPD_Wildtype	nonCOPD_Mut	nonCOPD_Wildtype	COPD Freq(%)	nonCOPD Freq(%)	P-value
XRCC2	0	69	3	123	0	2.380952381	0.553463203
BRCA2	6	63	8	118	8.695652174	6.349206349	0.569966328
BCOR	7	62	9	117	10.14492754	7.142857143	0.586210958
KDR	7	62	9	117	10.14492754	7.142857143	0.586210958
APLNR	2	67	2	124	2.898550725	1.587301587	0.615482202
BUB1B	2	67	2	124	2.898550725	1.587301587	0.615482202
CYLD	2	67	2	124	2.898550725	1.587301587	0.615482202
EPHB4	2	67	2	124	2.898550725	1.587301587	0.615482202
FYN	2	67	2	124	2.898550725	1.587301587	0.615482202
GNAQ	2	67	2	124	2.898550725	1.587301587	0.615482202
HNF1A	2	67	2	124	2.898550725	1.587301587	0.615482202
MERTK	2	67	2	124	2.898550725	1.587301587	0.615482202
MST1R	2	67	2	124	2.898550725	1.587301587	0.615482202
PLCG2	2	67	2	124	2.898550725	1.587301587	0.615482202
TET2	2	67	2	124	2.898550725	1.587301587	0.615482202
CIC	1	68	4	122	1.449275362	3.174603175	0.657759028
DDR2	1	68	4	122	1.449275362	3.174603175	0.657759028
FGA	1	68	4	122	1.449275362	3.174603175	0.657759028
FH	1	68	4	122	1.449275362	3.174603175	0.657759028
FLT4	1	68	4	122	1.449275362	3.174603175	0.657759028
HIST3H3	1	68	4	122	1.449275362	3.174603175	0.657759028
PBRM1	1	68	4	122	1.449275362	3.174603175	0.657759028
SMO	1	68	4	122	1.449275362	3.174603175	0.657759028
TNFRSF11A	1	68	4	122	1.449275362	3.174603175	0.657759028
ATG7	3	66	3	123	4.347826087	2.380952381	0.667666004
FOXP1	3	66	3	123	4.347826087	2.380952381	0.667666004
RET	3	66	3	123	4.347826087	2.380952381	0.667666004
MAP3K13	3	66	4	122	4.347826087	3.174603175	0.699668537
SMARCC2	3	66	4	122	4.347826087	3.174603175	0.699668537
BRCA1	2	67	6	120	2.898550725	4.761904762	0.714578609
ERBB3	2	67	6	120	2.898550725	4.761904762	0.714578609
KDM5A	2	67	6	120	2.898550725	4.761904762	0.714578609
BTK	4	65	5	121	5.797101449	3.968253968	0.722973356
IL7R	4	65	5	121	5.797101449	3.968253968	0.722973356
JAK2	4	65	5	121	5.797101449	3.968253968	0.722973356
NCOR1	4	65	5	121	5.797101449	3.968253968	0.722973356
NUTM1	4	65	5	121	5.797101449	3.968253968	0.722973356
PTPRO	4	65	5	121	5.797101449	3.968253968	0.722973356
SMAD4	4	65	5	121	5.797101449	3.968253968	0.722973356
THADA	4	65	5	121	5.797101449	3.968253968	0.722973356
CDK12	4	65	6	120	5.797101449	4.761904762	0.744675904
CREBBP	4	65	6	120	5.797101449	4.761904762	0.744675904
MED12	4	65	6	120	5.797101449	4.761904762	0.744675904
RICTOR	4	65	6	120	5.797101449	4.761904762	0.744675904
EPHA7	5	64	7	119	7.246376812	5.555555556	0.756993942
NSD1	5	64	7	119	7.246376812	5.555555556	0.756993942
LRP1B	26	43	51	75	37.68115942	40.47619048	0.760332764
AMER1	5	64	8	118	7.246376812	6.349206349	0.773666489
ARID2	5	64	8	118	7.246376812	6.349206349	0.773666489
ABCB1	6	63	13	113	8.695652174	10.31746032	0.804891251
STK11	6	63	13	113	8.695652174	10.31746032	0.804891251
FAT1	9	60	15	111	13.04347826	11.9047619	0.822680439
HUWE1	9	60	15	111	13.04347826	11.9047619	0.822680439
NF1	8	61	17	109	11.5942029	13.49206349	0.824293482
EPHA5	10	59	16	110	14.49275362	12.6984127	0.826117426
KMT2C	11	58	18	108	15.94202899	14.28571429	0.833950032
SPTA1	15	54	29	97	21.73913043	23.01587302	1
PTPRD	12	57	22	104	17.39130435	17.46031746	1
FAT3	11	58	19	107	15.94202899	15.07936508	1
ERBB4	8	61	14	112	11.5942029	11.11111111	1
FAT4	8	61	15	111	11.5942029	11.9047619	1
FAT2	6	63	11	115	8.695652174	8.73015873	1
NOTCH4	6	63	11	115	8.695652174	8.73015873	1
PTEN	6	63	10	116	8.695652174	7.936507937	1
RB1	6	63	11	115	8.695652174	8.73015873	1
NOTCH1	5	64	9	117	7.246376812	7.142857143	1
CFH	4	65	8	118	5.797101449	6.349206349	1
DYNC2H1	4	65	7	119	5.797101449	5.555555556	1
STAG2	4	65	8	118	5.797101449	6.349206349	1
ARID1A	3	66	7	119	4.347826087	5.555555556	1

Gene	COPD_Mut	COPD_Wildtype	nonCOPD_Mut	nonCOPD_Wildtype	COPD Freq(%)	nonCOPD Freq(%)	P-value
ATRX	3	66	7	119	4.347826087	5.555555556	1
CARD11	3	66	7	119	4.347826087	5.555555556	1
HGF	3	66	7	119	4.347826087	5.555555556	1
NOTCH2	3	66	7	119	4.347826087	5.555555556	1
NTRK2	3	66	6	120	4.347826087	4.761904762	1
POLE	3	66	7	119	4.347826087	5.555555556	1
SLCO1B1	3	66	5	121	4.347826087	3.968253968	1
SMARCA4	3	66	7	119	4.347826087	5.555555556	1
ALOX12B	2	67	4	122	2.898550725	3.174603175	1
ARID5B	2	67	4	122	2.898550725	3.174603175	1
BCL6	2	67	3	123	2.898550725	2.380952381	1
CHD4	2	67	5	121	2.898550725	3.968253968	1
CHEK2	2	67	4	122	2.898550725	3.174603175	1
DICER1	2	67	3	123	2.898550725	2.380952381	1
EPAS1	2	67	4	122	2.898550725	3.174603175	1
FGF23	2	67	5	121	2.898550725	3.968253968	1
FGF6	2	67	3	123	2.898550725	2.380952381	1
FGFR2	2	67	3	123	2.898550725	2.380952381	1
KDM6A	2	67	3	123	2.898550725	2.380952381	1
KEL	2	67	3	123	2.898550725	2.380952381	1
KIT	2	67	4	122	2.898550725	3.174603175	1
MET	2	67	3	123	2.898550725	2.380952381	1
MSH6	2	67	3	123	2.898550725	2.380952381	1
PDGFRB	2	67	3	123	2.898550725	2.380952381	1
PIK3C2B	2	67	5	121	2.898550725	3.968253968	1
PPP2R1A	2	67	4	122	2.898550725	3.174603175	1
SLX4	2	67	3	123	2.898550725	2.380952381	1
SNCAIP	2	67	5	121	2.898550725	3.968253968	1
SOS1	2	67	4	122	2.898550725	3.174603175	1
TOP2A	2	67	3	123	2.898550725	2.380952381	1
WT1	2	67	3	123	2.898550725	2.380952381	1
XIAP	2	67	3	123	2.898550725	2.380952381	1
ACTL6B	1	68	2	124	1.449275362	1.587301587	1
ADH1B	1	68	2	124	1.449275362	1.587301587	1
AR	1	68	3	123	1.449275362	2.380952381	1
ARAF	1	68	2	124	1.449275362	1.587301587	1
B2M	1	68	2	124	1.449275362	1.587301587	1
BCL2	1	68	1	125	1.449275362	0.793650794	1
BIRC3	1	68	1	125	1.449275362	0.793650794	1
CDH1	1	68	1	125	1.449275362	0.793650794	1
CDK8	1	68	3	123	1.449275362	2.380952381	1
CHEK1	1	68	3	123	1.449275362	2.380952381	1
CRLF2	1	68	2	124	1.449275362	1.587301587	1
CTCF	1	68	1	125	1.449275362	0.793650794	1
CYP2C8	1	68	1	125	1.449275362	0.793650794	1
DAXX	1	68	3	123	1.449275362	2.380952381	1
DIS3	1	68	3	123	1.449275362	2.380952381	1
DPYD	1	68	2	124	1.449275362	1.587301587	1
EML4	1	68	2	124	1.449275362	1.587301587	1
ERCC2	1	68	1	125	1.449275362	0.793650794	1
ETV1	1	68	1	125	1.449275362	0.793650794	1
FANCA	1	68	3	123	1.449275362	2.380952381	1
FANCC	1	68	1	125	1.449275362	0.793650794	1
FANCE	1	68	1	125	1.449275362	0.793650794	1
FANCF	1	68	1	125	1.449275362	0.793650794	1
FANCG	1	68	2	124	1.449275362	1.587301587	1
FANCL	1	68	1	125	1.449275362	0.793650794	1
FGF10	1	68	2	124	1.449275362	1.587301587	1
FGF14	1	68	2	124	1.449275362	1.587301587	1
FGF4	1	68	1	125	1.449275362	0.793650794	1
FOXO1	1	68	2	124	1.449275362	1.587301587	1
GATA6	1	68	1	125	1.449275362	0.793650794	1
GGH	1	68	1	125	1.449275362	0.793650794	1
HIST1H3E	1	68	2	124	1.449275362	1.587301587	1
HIST1H3G	1	68	1	125	1.449275362	0.793650794	1
HIST1H3I	1	68	2	124	1.449275362	1.587301587	1
HLA-B	1	68	2	124	1.449275362	1.587301587	1
HLA-C	1	68	1	125	1.449275362	0.793650794	1
HSD3B1	1	68	1	125	1.449275362	0.793650794	1
ID3	1	68	2	124	1.449275362	1.587301587	1

Gene	COPD_Mut	COPD_Wildtype	nonCOPD_Mut	nonCOPD_Wildtype	COPD Freq(%)	nonCOPD Freq(%)	P-value
IL6ST	1	68	1	125	1.449275362	0.793650794	1
IRF4	1	68	2	124	1.449275362	1.587301587	1
JAK1	1	68	2	124	1.449275362	1.587301587	1
KDM5C	1	68	3	123	1.449275362	2.380952381	1
LATS2	1	68	2	124	1.449275362	1.587301587	1
LTK	1	68	1	125	1.449275362	0.793650794	1
LYN	1	68	1	125	1.449275362	0.793650794	1
MAP3K1	1	68	2	124	1.449275362	1.587301587	1
MAPK1	1	68	1	125	1.449275362	0.793650794	1
MAPK3	1	68	1	125	1.449275362	0.793650794	1
MDM2	1	68	2	124	1.449275362	1.587301587	1
MSH2	1	68	1	125	1.449275362	0.793650794	1
MTAP	1	68	1	125	1.449275362	0.793650794	1
MTHFR	1	68	1	125	1.449275362	0.793650794	1
MUTYH	1	68	2	124	1.449275362	1.587301587	1
MYB	1	68	2	124	1.449275362	1.587301587	1
MYCN	1	68	1	125	1.449275362	0.793650794	1
NKX2-1	1	68	2	124	1.449275362	1.587301587	1
PARP1	1	68	2	124	1.449275362	1.587301587	1
PARP2	1	68	2	124	1.449275362	1.587301587	1
PARP3	1	68	2	124	1.449275362	1.587301587	1
PIK3C3	1	68	3	123	1.449275362	2.380952381	1
PIK3CB	1	68	3	123	1.449275362	2.380952381	1
PIK3R1	1	68	2	124	1.449275362	1.587301587	1
PIK3R2	1	68	1	125	1.449275362	0.793650794	1
PLK1	1	68	1	125	1.449275362	0.793650794	1
PMS1	1	68	2	124	1.449275362	1.587301587	1
PMS2	1	68	2	124	1.449275362	1.587301587	1
PPARG	1	68	3	123	1.449275362	2.380952381	1
PRKCI	1	68	2	124	1.449275362	1.587301587	1
PTK2	1	68	2	124	1.449275362	1.587301587	1
RAC2	1	68	2	124	1.449275362	1.587301587	1
RAD17	1	68	2	124	1.449275362	1.587301587	1
RAD50	1	68	3	123	1.449275362	2.380952381	1
RAD51C	1	68	2	124	1.449275362	1.587301587	1
RPTOR	1	68	3	123	1.449275362	2.380952381	1
RRM1	1	68	2	124	1.449275362	1.587301587	1
SLC34A2	1	68	3	123	1.449275362	2.380952381	1
SMAD2	1	68	1	125	1.449275362	0.793650794	1
SMARCA2	1	68	3	123	1.449275362	2.380952381	1
STAT1	1	68	3	123	1.449275362	2.380952381	1
SUZ12	1	68	1	125	1.449275362	0.793650794	1
TBX3	1	68	2	124	1.449275362	1.587301587	1
TERT	1	68	3	123	1.449275362	2.380952381	1
TFG	1	68	3	123	1.449275362	2.380952381	1
TGFBR2	1	68	2	124	1.449275362	1.587301587	1
TNFSF11	1	68	1	125	1.449275362	0.793650794	1
TSC1	1	68	1	125	1.449275362	0.793650794	1
UMPS	1	68	3	123	1.449275362	2.380952381	1
WNT10B	1	68	1	125	1.449275362	0.793650794	1
XRCC1	1	68	2	124	1.449275362	1.587301587	1
ARFRP1	0	69	1	125	0	0.793650794	1
AXIN1	0	69	1	125	0	0.793650794	1
BCL2L1	0	69	1	125	0	0.793650794	1
CCNE1	0	69	1	125	0	0.793650794	1
CDA	0	69	1	125	0	0.793650794	1
CDC42	0	69	1	125	0	0.793650794	1
CDKN1A	0	69	1	125	0	0.793650794	1
CXCR4	0	69	1	125	0	0.793650794	1
CYP19A1	0	69	1	125	0	0.793650794	1
EPCAM	0	69	1	125	0	0.793650794	1
ERCC4	0	69	1	125	0	0.793650794	1
ERCC5	0	69	1	125	0	0.793650794	1
ERG	0	69	1	125	0	0.793650794	1
EWSR1	0	69	1	125	0	0.793650794	1
EZR	0	69	1	125	0	0.793650794	1
FANCD2	0	69	1	125	0	0.793650794	1
FANCI	0	69	1	125	0	0.793650794	1
FAS	0	69	1	125	0	0.793650794	1
FGF12	0	69	1	125	0	0.793650794	1

Gene	COPD_Mut	COPD_Wildtype	nonCOPD_Mut	nonCOPD_Wildtype	COPD Freq(%)	nonCOPD Freq(%)	P-value
FLCN	0	69	1	125	0	0.793650794	1
FOXA1	0	69	1	125	0	0.793650794	1
GNA11	0	69	1	125	0	0.793650794	1
GREM1	0	69	1	125	0	0.793650794	1
GSTP1	0	69	1	125	0	0.793650794	1
GSTT1	0	69	1	125	0	0.793650794	1
IFNGR1	0	69	1	125	0	0.793650794	1
IGF1	0	69	1	125	0	0.793650794	1
JUN	0	69	1	125	0	0.793650794	1
LMO1	0	69	1	125	0	0.793650794	1
MAP2K4	0	69	1	125	0	0.793650794	1
MDM4	0	69	1	125	0	0.793650794	1
MPL	0	69	1	125	0	0.793650794	1
MYCL	0	69	1	125	0	0.793650794	1
NF2	0	69	1	125	0	0.793650794	1
NFKBIA	0	69	1	125	0	0.793650794	1
NKX3-1	0	69	1	125	0	0.793650794	1
NUP93	0	69	1	125	0	0.793650794	1
PAK1	0	69	1	125	0	0.793650794	1
PDCD1	0	69	1	125	0	0.793650794	1
PDCD1LG2	0	69	1	125	0	0.793650794	1
PDE4D	0	69	1	125	0	0.793650794	1
PIM1	0	69	1	125	0	0.793650794	1
RAD51	0	69	1	125	0	0.793650794	1
RECQL4	0	69	1	125	0	0.793650794	1
RHEB	0	69	1	125	0	0.793650794	1
RPS6KA3	0	69	1	125	0	0.793650794	1
RSPO2	0	69	1	125	0	0.793650794	1
RUNX1	0	69	1	125	0	0.793650794	1
SDHAF2	0	69	1	125	0	0.793650794	1
SDHC	0	69	1	125	0	0.793650794	1
SMARCD1	0	69	1	125	0	0.793650794	1
STAT6	0	69	1	125	0	0.793650794	1
SUFU	0	69	1	125	0	0.793650794	1
TIPARP	0	69	1	125	0	0.793650794	1
TNFRSF14	0	69	1	125	0	0.793650794	1
WAS	0	69	1	125	0	0.793650794	1
XPA	0	69	1	125	0	0.793650794	1