

Table S1 Details of baseline information for all cohorts

Variables	TCGA-LUAD	CPTAC-LUAD	GSE31210	GSE37745	GSE50081	GSE126044	GSE91061
No. of Patients	504	96	58	106	181	16	105
Age, n (%)							
<60 years	136 (27.0)	38 (39.6)	25 (43.1)	42 (39.6)	27 (14.9)		
≥60 years	358 (71.0)	58 (60.4)	33 (56.9)	64 (60.4)	154 (85.1)		
Not available	10 (2.0)						
Gender, n (%)							
Female	270 (53.6)	33 (34.4)	24 (41.4)	60 (56.6)	83 (45.9)		
Male	234 (46.4)	63 (65.6)	34 (58.6)	46 (43.4)	98 (54.1)		
Stage, n (%)							
Stage I	270 (53.6)	49 (51.0)		70 (66.0)	127 (70.2)		
Stage II	119 (23.6)	28 (29.2)	58 (100.0)	19 (17.9)	54 (29.8)		
Stage III	81 (16.1)	18 (18.8)		13 (12.3)			
Stage IV	26 (5.2)	1 (1.0)		4 (3.8)			
Not available	8 (1.6)						
T stage, n (%)							
T1	168 (33.3)	23 (24.0)			57 (31.5)		
T2	269 (53.4)	62 (64.6)			122 (67.4)		
T3	45 (8.9)	11 (11.5)			2 (1.1)		
T4	19 (3.8)						
Not available	3 (0.6)						
N stage, n (%)							
N0	325 (64.5)	65 (67.7)			129 (71.3)		
N1	94 (18.7)	15 (15.6)			52 (28.7)		
N2	71 (14.1)	16 (16.7)					
N3	2 (0.4)						
Not available	12 (2.4)						
M stage, n (%)							
M0	335 (66.5)				181 (100.0)		
M1	25 (5.0)						
Not available	144 (28.6)						
Survival status, n (%)							
Alive	321 (63.7)	74 (77.1)	40 (69.0)	29 (27.4)	106 (58.6)		
Dead	183 (36.3)	22 (22.9)	18 (31.0)	77 (72.6)	75 (41.4)		
Response to ICIs, n							
Response						5	23
Non-response						11	82

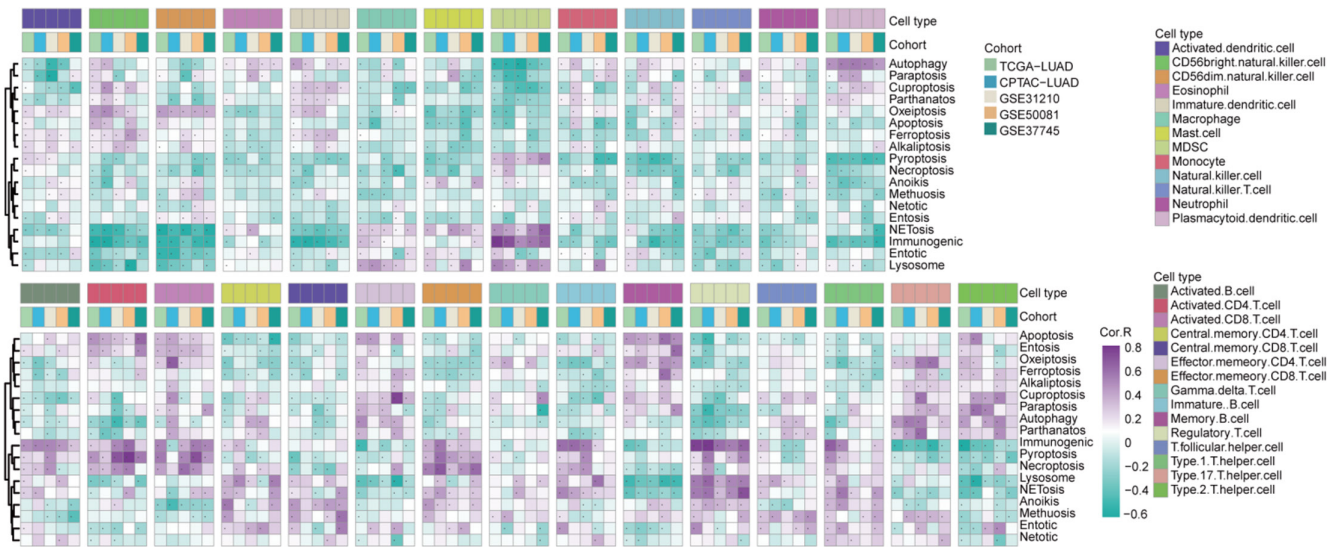


Figure S1 The relationship between 18 PCD signatures and the 28 immune cells infiltration.

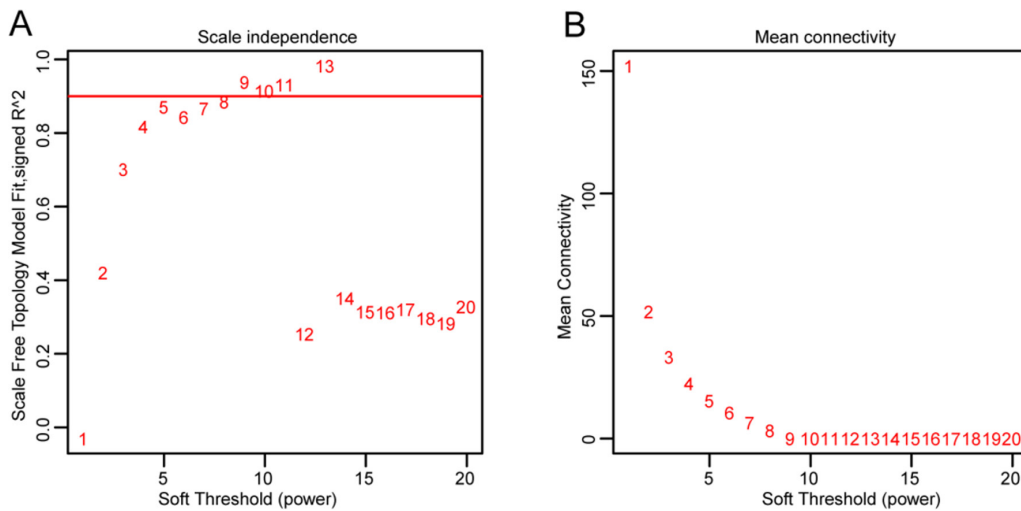


Figure S2 The network topological structure under different soft-thresholding powers was analyzed to ensure the characteristics of the scale-free network. (A) The panel shows the relationship between the scale-free fit index and the soft-thresholding power. (B) The right panel illustrates the relationship between the mean connectivity (the degree of gene co-expression) and the soft-thresholding power.