

Supplementary Table S1. Baseline clinical, pathologic, and treatment characteristics of the ICON cohort (n = 66).

Variable	N (%) or Median (IQR)
Age, years	66.5 (61.0-73.0)
Sex	
Female	37 (56.1)
Male	29 (43.9)
Smoking	
Never	9 (13.6)
Former/Current	57 (86.4)
Zubrod Performance Status	
0	11 (16.7)
1	55 (83.3)
Histology	
Adenocarcinoma	47 (71.2)
Squamous Cell Carcinoma	16 (24.2)
Other	3 (4.6)
Differentiation	
High	10 (15.2)
Moderate	36 (54.6)
Low	20 (30.3)
Preoperative Neutrophil Count, 10³ cells/μL	4.20 (3.32-5.83)
Preoperative Lymphocyte Count, 10³ cells/μL	1.81 (1.46-2.25)
Extent of Resection	
Sublobar	6 (9.1)
Lobectomy/Bilobectomy	57 (86.4)
Pneumonectomy	3 (4.6)
Operative Approach	
VATS	21 (31.8)
Thoracotomy	45 (68.2)
Pathologic Margin	
R0	61 (92.4)
R1	5 (7.6)
Pathologic Tumor Size, cm	4.0 (3.1-5.5)
Pathologic Stage	
I	30 (45.5)
II	23 (34.9)
III	12 (18.2)
IV	1 (1.5)
Adjuvant Therapy	
Chemotherapy	32 (48.5)
Radiotherapy	7 (10.6)

Supplementary Table S2. Baseline clinical, pathologic, and treatment characteristics of the historical MDACC cohort (n =1524).

Variable	N (%) or Median (IQR)
Age, years	66.4 (59.3-73.4)
Sex	
Female	779 (51.1)
Male	745 (48.9)
Smoking	
Never	341 (22.4)
Former/Current	1183 (77.6)
Zubrod Performance Status	
0	1006 (66.0)
1-2	518 (34.0)
Major Comorbidities	
Congestive Heart Failure	9 (0.6)
Coronary Artery Disease	189 (12.4)
Chronic Obstructive Pulmonary Disease	274 (18.0)
Diabetes Mellitus	197 (12.9)
Alcohol Use	333 (21.9)
ASA Classification	
1	123 (8.1)
2	376 (24.7)
3	1008 (66.1)
4	17 (1.1)
Histology	
Adenocarcinoma	905 (59.4)
Squamous Cell Carcinoma	365 (24.0)
Other	254 (16.7)
Differentiation*	
High	377 (24.7)
Moderate	635 (41.7)
Low	102 (6.7)
Preoperative Neutrophil Count, 10³ cells/μL	4.22 (3.33-5.42)
Preoperative Lymphocyte Count, 10³ cells/μL	1.81 (1.39-2.30)
Extent of Resection	
Sublobar	219 (14.4)
Lobectomy/Bilobectomy	1246 (81.8)
Pneumonectomy	59 (3.9)
Operative Approach	
VATS/RATS	680 (44.6)
Thoracotomy	844 (55.4)

Pathologic Margin	
R0	1450 (95.1)
R1	66 (4.3)
R2	8 (0.5)
Pathologic Tumor Size (cm)	2.5 (1.8-4.0)
Pathologic Stage	
I	959 (62.9)
II	350 (23.0)
III	210 (13.8)
IV	5 (0.3)
Adjuvant Therapy	
Chemotherapy	316 (20.7)
Radiotherapy	125 (8.2)

ASA, American Society of Anesthesiologists; *For 102 (6.7%) patients, differentiation was unknown or not reported.

Supplementary Table S3. Multivariable linear regression analysis (left, beginning multivariable model before model selection; right, final model) of clinicopathologic features associated with circulating preoperative neutrophil counts in the ICON cohort (n = 66).

Variable	Multivariable, Before Fitting			Multivariable, Final		
	Coefficient	Std. Error	P	Coefficient	Std. Error	P
Pathologic Tumor Size (cm)	0.068	0.033	0.046	0.072	0.027	0.009
Pathologic Stage (reference = I)						
II	-0.057	0.152	0.711			
III/IV	-0.212	0.171	0.220			
Smoking (reference = former/current)	-0.004	0.178	0.983	-	-	
Sex (male)	0.023	0.128	0.856			
Histology, squamous (reference = adenocarcinoma)		0.152	0.184			
Squamous cell carcinoma	0.204	0.355	0.881			
Other	-0.054		-			

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Supplementary Table S4. Multivariable linear regression analysis (left, beginning multivariable model before model selection; right, final model) of clinicopathologic features associated with circulating preoperative neutrophil counts in the historical MDACC cohort (n = 1524).

Variable	Multivariable, Before Fitting			Multivariable, Final		
	Coefficient	Std. Error	P	Coefficient	Std. Error	P
Pathologic Tumor Size (cm)	0.051	0.007	<0.001	0.055	0.006	<0.001
Pathologic Stage (reference = I)						
II	0.042	0.032	0.194			
III/IV	0.036	0.035	0.309			
Smoking (reference = never)	0.157	0.029	<0.001	0.154	0.029	<0.001
Sex (male)	-0.018	0.024	0.454			
Histology, squamous (reference = adenocarcinoma)				0.142		
Squamous cell carcinoma	0.145	0.029	<0.001	0.049	0.029	<0.001
Other	0.051	0.033	0.118		0.033	0.131

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Supplementary Table S5. Multivariable linear regression analysis (left, beginning multivariable model before model selection; right, final model) of features associated with CD3⁺CD8⁺ cell infiltration in the tumor compartment (*n* = 43).

Variable	Multivariable, Before Fitting			Multivariable, Final		
	Coefficient	Std. Error	<i>P</i>	Coefficient	Std. Error	<i>P</i>
Tumor Neutrophils (RNA signature)	-1.560	0.659	0.023	-1.758	0.531	0.002
Tumor Mutational Burden, mutations/Mb	0.162	0.403	0.691			
Pathologic Tumor Size, cm	-0.042	0.262	0.872			
Histology, squamous (reference = nonsquamous)	-0.300	1.276	0.816			
Tumor PD-L1 Expression, percent	0.161	0.180	0.378			

Supplementary Table S6. Multivariable linear regression analysis (left, beginning multivariable model before model selection; right, final model) of features associated with CD3⁺CD8⁺ cell infiltration in the stromal compartment (*n* = 43).

Variable	Multivariable, Before Fitting			Multivariable, Final		
	Coefficient	Std. Error	<i>P</i>	Coefficient	Std. Error	<i>P</i>
Tumor Neutrophils (RNA signature)	-1.513	0.508	0.005	-1.344	0.407	0.002
Tumor Mutational Burden, mutations/Mb	-0.014	0.310	0.964			
Pathologic Tumor Size, cm	0.070	0.202	0.732			
Histology, squamous (reference = nonsquamous)	-0.967	0.984	0.332			
Tumor PD-L1 Expression, percent	0.046	0.139	0.743			