Table S1. Antibodies for Immunohistochemistry

Cell Marker	Immunohistochemistry	Species Isotype	Company (Clone)	Final Diluition
PD-L1	IF, IP	Rabbit monoclonal	Abcam (28-8)	1:50
	IF, IP	Rabbit monoclonal	Spring Bioscience (SP142)	1:50
	IF, IP	Rabbit monoclonal	Cell Signaling (E1L3N)	1:100
	IP	Rabbit monoclonal	Ventana-Roche (SP263)	Ready-to-use
CK	IF	Mouse monoclonal	DAKO (M3515)	1:50
CD3	IF	Mouse monoclonal	Biocare (2GV6)	1:100
	IP	Rabbit monoclonal	Ventana-Roche (2GV6)	Ready-to-use
CD8	IF	Rabbit monoclonal	Thermo Scientific (SP16)	1:50
	IP	Rabbit monoclonal	Neomarkers (SP16)	1:50
CD4	IF	Rabbit monoclonal	Ventana-Roche (SP135)	Ready-to-use
	IP	Rabbit monoclonal	Neomarkers (SP16)	1:50
PD-1	IF	Mouse monoclonal	Abcam (NAT105)	1:20
	IP	Mouse monoclonal	Ventana-Roche (NAT105)	1:100
CD25	IP	Mouse monoclonal	Ventana-Roche (4C9)	Ready-to-use
CD57	IP	Mouse monoclonal	Ventana-Roche (NK1)	Ready-to-use
FOXP3	IP	Rabbit monoclonal	Spring-Bioscence (SP97)	Ready-to-use
Granzyme B	IF	Rabbit polyclonal	Ventana-Roche	Ready-to-use
ALK	IP	Rabbit monoclonal	Ventana (D5F3)	Ready to use

PD-L1, Programmed Death-Ligand 1; **CK**, Cytokeratin; **IF**, Immunofluorescence; **IP**, Immunoperoxidase; **PD-1**, Programmed Death-1; **ALK**, Anaplastic Lymphoma Kinase

Table S2. Magnitude of Sampling

Analyzed Parameter	SCC	ADC	NSCLC
	Mean±SE	Mean±SE	Mean±SE
PD-L1			
• **H-Score, n**	27	41	68
Tumor Cells counted, *n*	539,660±14,424	509,975±52,974	524,817±25,478
Sampled area, mm^2	241.9±16.4	204.7±18.7	223.3±12.4
• **QIF, n**	17	25	42
Tumor Cells counted, *n*	108,231±10,277	89,954±8,542	99,093±5,393
Sampled area, mm^2	20.0±0.0	20.0±0.0	20.0±0.0
TILs			
• **CD3, n**	61	52	113
Cells counted, *n*	28,249±2,778	45,708±14,065	36,979±5,767
Sampled area, mm^2	12.4±0.1	11.3±0.7	11.9±0.2
• **CD8, n**	62	53	115
Cells counted, *n*	18,954±1,409	34,100±5,397	26,527±2,341
Sampled area, mm^2	8.3±0.3	8.5±0.5	8.4±0.2
• **CD4, n**	16	10	26
Cells counted, *n*	34,173±6,379	60,461±15,397	47,317±7,276
Sampled area, mm^2	15.0±0.0	15.0±0.0	15.0±0.0
• **PD-1, n**	59	50	109
Cells counted, *n*	28,659±3,665	37,566±7,252	33,113±3,850
Sampled area, mm^2	9.3±0.6	12.6±0.6	10.9±0.4
• **CD25, n**	8	7	15
Cells counted, *n*	30,186±5,540	55,745±8,874	42,965±5,054
Sampled area, mm^2	13.2±1.2	13.8±1.2	13.5±0.8
• **CD57, n**	16	9	25
Cells counted, *n*	41,099±21,223.3	73,077.2±21,800.6	57,088±15,029.5
Sampled area, mm^2	18.0±0.4	18.1±0.8	18.1±0.4
• **Granzyme B, n**	6	6	12
Cells counted, *n*	22,007.5±8,468.4	34,422.5±13,801.7	28,215±7,873.5
Sampled area, mm^2	8.9±0.9	9.0±0.9	9.0±0.6

n = number of cases. Cells counted (*n*) and sampled area (mm^2) represent the average values ± standard error (SE) of each measured parameter on each case.

Table S3. Morphometric Analysis of Tissue Composition

	SCC	ADC
	Mean±SE	Mean±SE
Neoplastic Cells, %	40.49 ± 2.04	55.38 ± 2.50 (*)
Necrosis, %	9.73 ± 1.40	4.18 ± 0.81 (*)
TILs, %	11.55 ± 1.36	13.64 ± 2.08
Fibrosis, %	19.32 ± 1.12	14.68 ± 1.10 (*)
SV, %	7.67 ± 0.71	9.98 ± 1.26 (*)

TILs, Tumor Infiltrating Lymphocytes; **SV**, Stromal and Vascular Compartments.
* $p < 0.05$ vs SCC