

Supplementary Table S3. Significant features in the univariable analysis for prediction of tumor response.

Feature Description	LLR	P-value
From the Panel 1 sample, within the epithelial tumor region: The median distance of a CD8+ cell from the nearest PanCK+ cell, within a 30 µm search radius	15.06	<0.001
From the Panel 2 sample, within the tumor region: The average number of PD1+ cells within 30 µm of a PDL1+ cell	12.54	<0.001
From the Panel 1 sample, within the tumor region: The average number of CD8+ cells within 10 µm of a PanCK+ cell	12.07	<0.001
From the Panel 1 sample, within the tumor region: The median distance of a CD8+ cell to the nearest PanCK+ cell, within a 30 µm search radius	12.07	<0.001
From the Panel 1 sample, within the tumor stroma region: The number of CD3+ cells divided by the total number of cells	11.91	<0.001
From the Panel 1 sample, within the epithelial tumor region: The average number of CD8+ cells within 30 µm of a PanCK+ cell	11.80	<0.001
From the Panel 2 sample, within the epithelial tumor region: The number of CD8+ /PanCK+ cells divided by the total number of cells	11.75	<0.001
From the Panel 2 sample, within the tumor region: The average number of PD1+ cells within 10 µm of a PDL1+ cell	11.68	<0.001
From the Panel 1 sample, within the tumor region: The average number of CD8+ cells within 30 µm of a PanCK+ cell	11.61	<0.001
From the Panel 1 sample, within the tumor region: The average number of CD8+ cells within 10 µm of a PanCK+ cell	11.22	<0.001
From the Panel 2 sample, within the tumor region: The number of CD8+/PanCK+ cells divided by the total number of cells	11.05	<0.001
From the Panel 2 sample, within the epithelial tumor region: The average number of PDL1+ cells within 10 µm of a PD1+ cell	10.94	<0.001
From the Panel 2 sample, within the epithelial tumor region: The average number of PDL1+ cells within 30 µm of a PD1+ cell	10.8	0.001
From the Panel 1 sample, within the tumor region: The number of CD3+ cells divided by the total number of cells	10.23	0.001
From the Panel 1 sample, within the tumor stroma region: The number of CD3+/CD8+/PDL1- cells divided by the total number of cells	9.66	0.002
From the Panel 1 sample, within the tumor stroma region: The number of CD8+ cells divided by the total number of cells	9.38	0.002
From the Panel 2 sample, within the tumor region: The number of PanCK+/PD1+ cells divided by the total number of cells	9.02	0.003

From the Panel 2 sample, within the epithelial tumor region: The number of CD8+/PanCK-cells divided by the total number of cells	9.00	0.003
From the Panel 1 sample, within the epithelial tumor region: The number of CD3+ cells divided by the total number of cells	8.64	0.003
From the Panel 2 sample, within the tumor region: The average number of PDL1+ cells within 10 µm of a PD1+ cell	7.88	0.005
From the Panel 2 sample, within the tumor region: The number of PanCK+/PDL1+ cells divided by the total number of cells	7.77	0.005
From the Panel 2 sample, within the tumor stroma region: The average number of PDL1+ cells within 30 µm of a PD1+ cell	7.60	0.006
From the Panel 1 sample, within the tumor region: The number of CD8+ cells divided by the total number of cells	7.38	0.007
From the Panel 2 sample, within the epithelial tumor region: The average number of PD1+ cells within 10 µm of a PDL1+ cell	7.35	0.007
From the Panel 2 sample, within the tumor region: The number of PanCK-/LAG3+ cells divided by the total number of cells	7.33	0.007
From the Panel 1 sample, within the tumor region: The average number of CD8+ cells within 10 µm of a PanCK+/PDL1+ cell	7.25	0.007
From the Panel 2 sample, within the tumor region: The average number of PD1+ cells within 30 µm of a PDL1+ cell	7.22	0.007
From the Panel 2 sample, within the epithelial tumor region: The average number of PD1+ cells within 30 µm of a PDL1+ cell	6.98	0.008
From the Panel 2 sample, within the epithelial tumor region: The median distance of a CD8+/PDL1+ cell from the nearest CD8+/PD1+ cell, within a 30 µm search radius	6.97	0.008
From the Panel 2 sample, within the tumor stroma region: The number of PanCK-/LAG3+ cells divided by the total number of cells	6.94	0.008
From the Panel 1 sample, within the Tumor region: The number of CD3+/CD8+/PDL1- cells divided by the total number of cells	6.77	0.009
From the Panel 2 sample, within the epithelial tumor region: The median distance of a CD8+ cell from the nearest PDL1+/PanCK+ cell, within a 30 µm search radius	6.55	0.01
From the Panel 2 sample, within the tumor region: The number of PanCK-/CD8+ cells divided by the total number of cells	6.42	0.01
From the Panel 2 sample, within the tumor stroma region: The number of PanCK-/CD8+ cells divided by the total number of cells	6.41	0.01
From the Panel 2 sample, within the tumor stroma region: The average number of PDL1+ cells within 10 µm of a PD1+ cell	6.13	0.01
From the Panel 1 sample, within the epithelial tumor region: The average number of CD8+ cells within 10 µm of a PDL1+/PanCK+ cell	6.06	0.01
From the Panel 2 sample, within the tumor region: The median distance of a PDL1+ cell from the nearest PD1+ cell, within a 30 µm search radius	5.74	0.02

From the Panel 2 sample, within the tumor region: The median distance of a PD1 cell from the nearest PDL1+ cell, within a 30 μm search radius	5.21	0.02
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