

Supplementary Table S1: Observations by Dose Level (Efficacy and PD-L1)

Variables	Dose Level 1/2	Dose Level 3/4	P-Value	Total
Sample Size	N = 16	N = 17		N = 33
ORR Status - n (%)				
No Response	10 (83.33)	11 (84.62)	>0.99	21 (84)
Response	2 (16.67)	2 (15.38)		4 (16)
Unknown	4	4		8
ORR irRECIST Status - n (%)				
No Response	9 (75)	11 (84.62)	0.645	20 (80)
Response	3 (25)	2 (15.38)		5 (20)
Unknown	4	4		8
Clinical Benefit Status - n (%)				
No Benefit	4 (33.33)	6 (46.15)	0.688	10 (40)
Benefit	8 (66.67)	7 (53.85)		15 (60)
Unknown	4	4		8
PD-L1 Tumor (%)				
> 1% Baseline	5 (38.46)	5 (31.25)	0.714	10 (34.48)
> 1% Timepoint 1	6 (46.15)	5 (33.33)	0.700	11 (39.29)
> 1% Timepoint 2	3 (42.86)	2 (33.33)	>0.99	5 (38.46)
PD-L1 Lymphocyte (%)				
> 1% Baseline	2 (16.67)	5 (31.25)	0.662	7 (25)
> 1% Timepoint 1	1 (11.11)	6 (40)	0.191	7 (29.17)
> 1% Timepoint 2	1 (14.29)	2 (33.33)	0.559	3 (23.08)

Supplementary Table S2: Tissue for correlative analyses

	Biopsy collected	TILs	CD8	FoxP3	CD8/ FoxP3 Ratio	PDL1 (Tumor)	PDL1 (Immune)	IDO
Baseline	33	22	28	28	28	28	28	28
Timepoint 1	28	24	28	28	28	28	22	28
Timepoint 2	14	12*	14	14	14	13	13	14

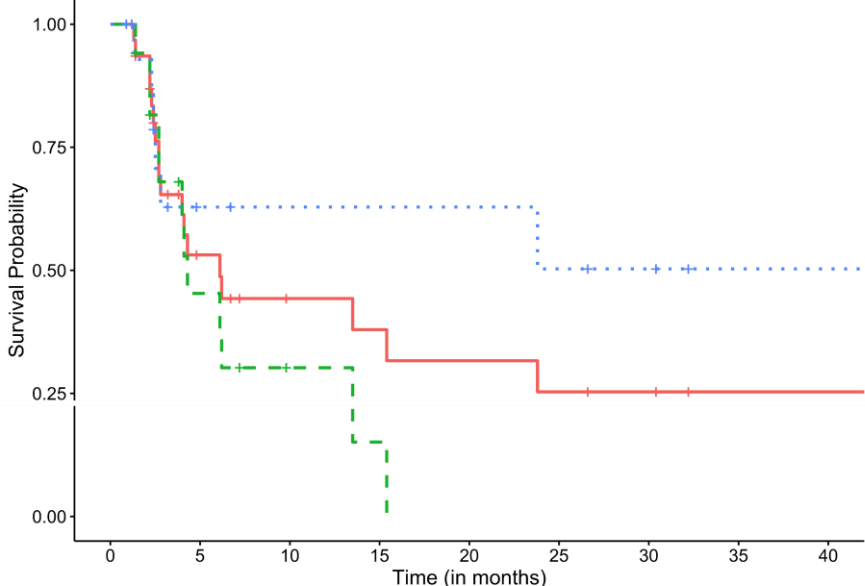
Supplementary Table S3: Tumor Infiltrating Lymphocyte Data

Baseline			Timepoint 1			Timepoint 2		
TIL range	Tumor type (n)	Percent TIL	TIL range	Tumor Type (n)	Percent TIL	TIL range	Tumor Type (n)	Percent TIL
<1%	Parotid (1) ACC (2) Cervical Squamous (1) Breast (1) Small Bowel (1)	0	<1%	PEComa (1) CC (1) Acinic cell Carcinoma (1) ACC (2) Lung (1)	0	<1%	PEComa (1) ACC (1)	0
1-5%	Lung (1) Breast (5) CC (1) Liver (1) ACC (1)	3	1-5%	Breast (6) Cervical squamous (1) Endometrial (1) CC (1)	3	1-5%	Parotid (1) Breast (2) ACC (1)	3
5-10%	Rectal (1) Apocrine AdenoCa (1) Ovarian (1)	8	5-10%	Liver (1) Rectal (1) Small bowel (1) Breast (1)	6.5	5-10%	Rectal (1) Endometrial (1) Small bowel (1) Breast (1)	7
10-25%	Breast (1) Gastric (1)	12.5	10-25%	Ovarian (1) Gastric (1)	15	10-25%	*Breast (2)	15
>25	Pancreas (1)	25	>25	Apocrine AdenoCa (1) Breast (2)	52.5	>25	N/A	N/A
Median		3%			3%			3%

Supplementary Figures

Supplementary Figure S1: Progression-Free and Overall Survival

A Progression Free Survival

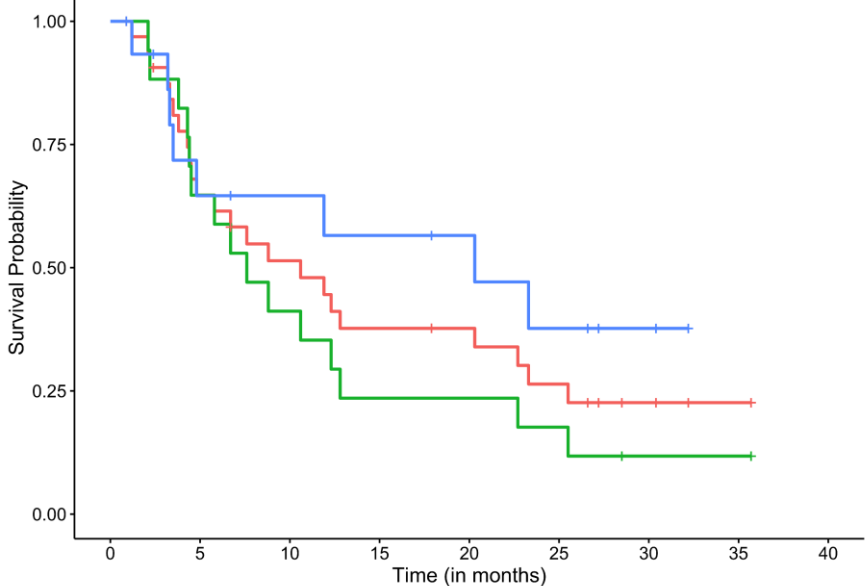


Group
 Overall
 Dose Level 1/2
 Dose Level 3/4

Number at risk

Group	0	5	10	15	20	25	30	35	40
Overall	33	12	7	6	5	4	3	1	1
Dose Level 1/2	17	6	2	1	0	0	0	0	0
Dose Level 3/4	16	6	5	5	5	4	3	1	1

B Overall Survival

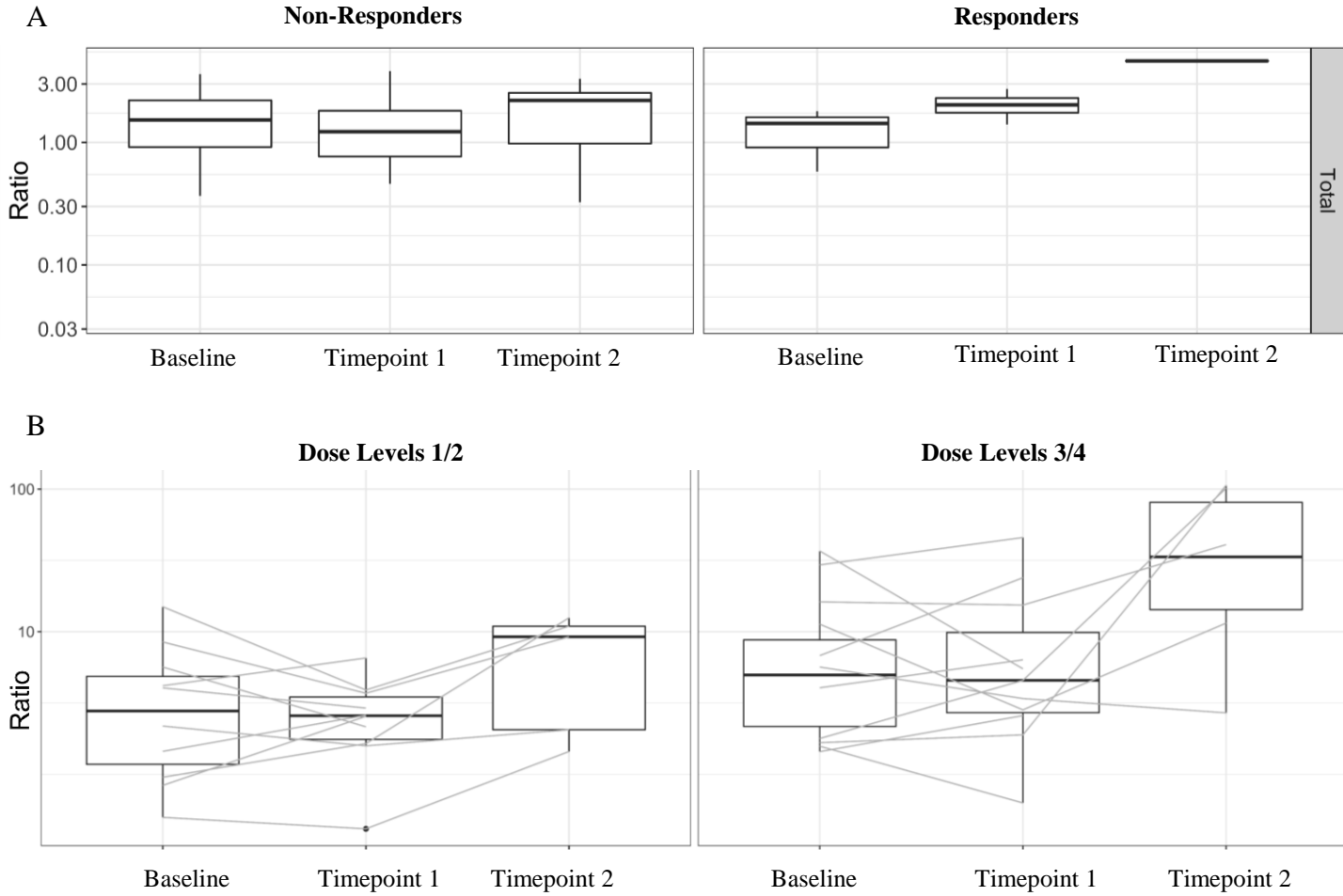


Group
 Overall
 Dose Level 1/2
 Dose Level 3/4

Number at risk

Group	0	5	10	15	20	25	30	35	40
Overall	33	20	15	11	10	7	3	1	0
Dose Level 1/2	17	11	7	4	4	3	1	1	0
Dose Level 3/4	16	9	8	7	6	4	2	0	0

Supplementary Figure S2: CD8/FoxP3 Ratio



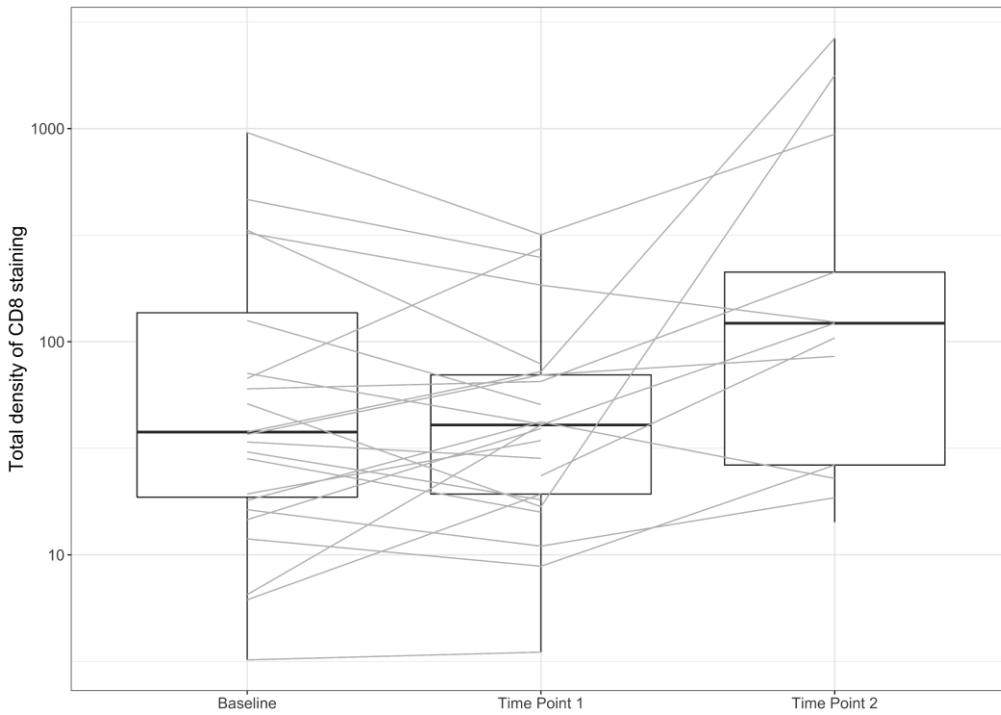
C

Marker	Time Point	n	Density Median [Q1, Q3]	Density Mean (SD)	Density {Min, Max}	P-value*
CD8/FoxP3 Ratio (All dose levels)	Baseline	26	4.11 [1.7, 6.61]	6.94 (8.77)	{0.5, 36.8}	
	Timepoint 1	28	3.56 [2.06, 6.25]	7.16 (9.79)	{0.41, 45.77}	
	Timepoint 2	14	9.03 [2.6, 12.79]	15.37 (25.79)	{0.77, 101.35}	
CD8/FoxP3 Ratio (Dose Level 1/2)	Baseline	11	2.78 (1.2, 4.91)	4.18 (4.3)	{0.5, 14.95}	0.12
	Timepoint 1	13	2.26 (2.05, 3.72)	3.58 (3.86)	{0.41, 15.33}	0.11
	Timepoint 2	8	5.89 (1.89, 11.98)	6.65 (5.43)	{0.77, 12.88}	0.01
CD8/FoxP3 Ratio (Dose Level 3/4)	Baseline	15	4.97 (2.21, 9.04)	8.97 (10.66)	{1.44, 36.8}	
	Timepoint 1	15	5.89 (2.92, 11.95)	10.26 (12.24)	{0.55, 45.77}	
	Timepoint 2	6	12.54 (6.5, 24.41)	27 (37.46)	{2.7, 101.35}	

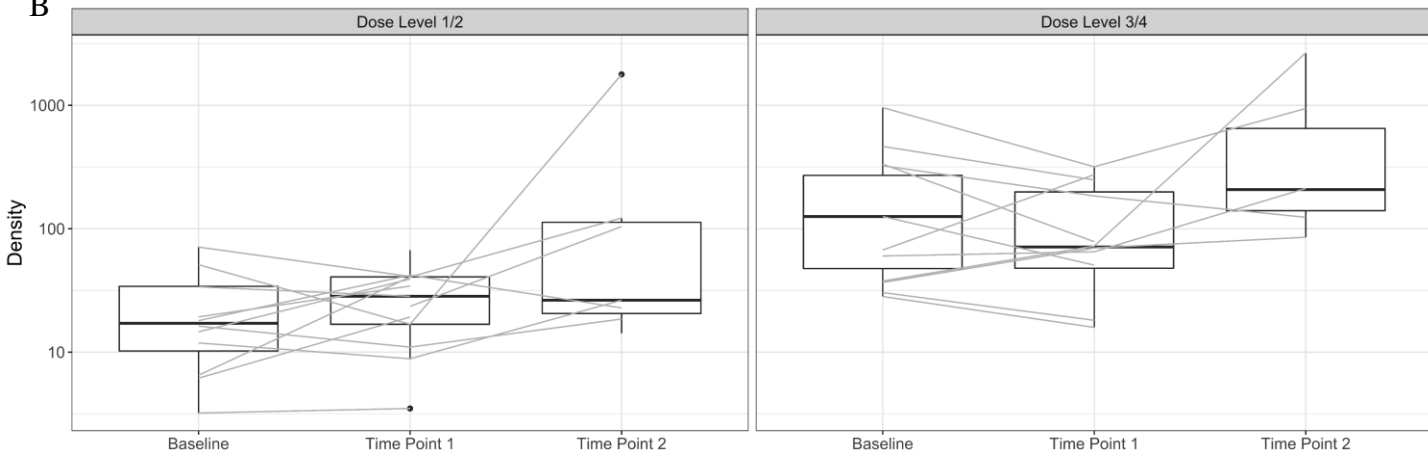
Supplementary Figure S3: CD8 Density

All dose levels

A



B

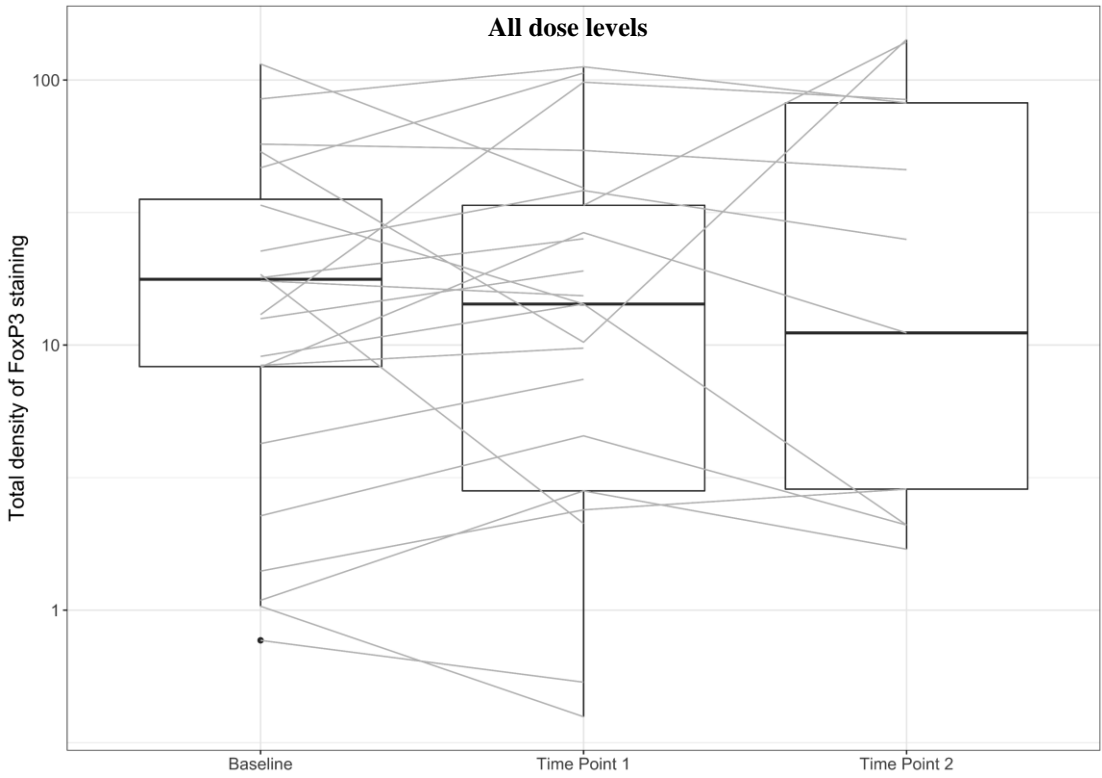


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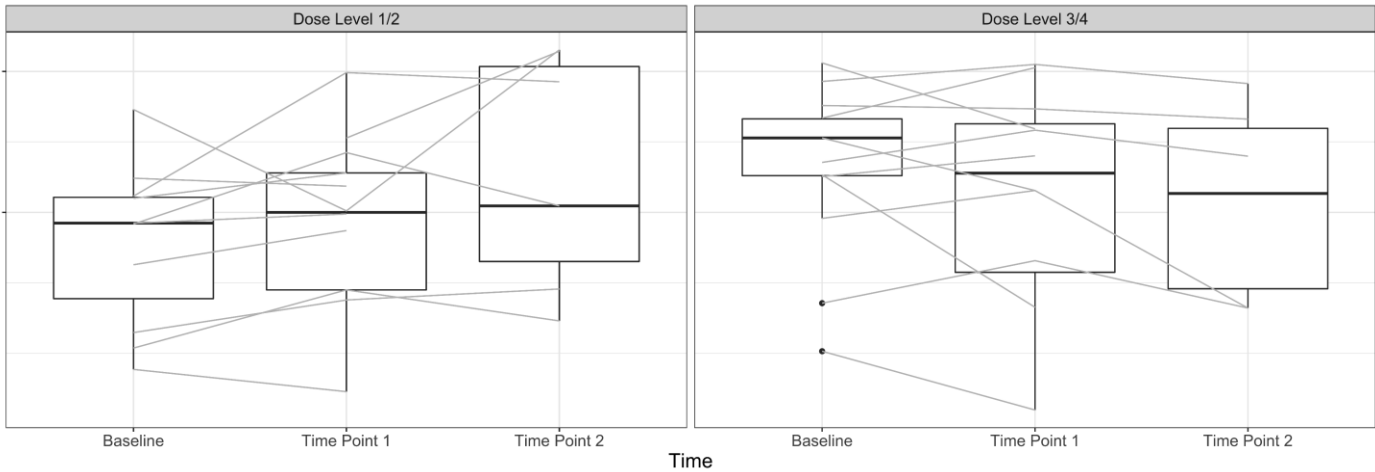
Marker	Time Point	n	Density Median [Q1, Q3]	Density Mean (SD)	Density {Min, Max}	P-value*
CD8 (All dose levels)	Baseline	27	37.69 [18.66, 137.19]	126.52 (203.61)	{3.21, 958.37}	
	Timepoint 1	28	40.87 [23.62, 87.45]	107.59 (200.65)	{3.5, 1044.1}	
	Timepoint 2	14	107.44 [33.23, 193.81]	509.28 (955.5)	{14.23, 3297.5}	
CD8 (Dose Level 1/2)	Baseline	12	17.15 [10.54, 34.12]	23.91 (20.4)	{3.21, 71.05}	< 0.001
	Timepoint 1	13	28.37 [17.66, 40.7]	28.7 (17.85)	{3.5, 66.92}	0.002
	Timepoint 2	8	40.09 [21.58, 104.22]	266.15 (612.59)	{14.23, 1779.26}	0.05
CD8 (Dose Level 3/4)	Baseline	15	123.63 [48.9, 279.92]	208.6 (245.81)	{28.27, 958.37}	
	Timepoint 1	15	83.23 [42.51, 191.84]	175.97 (258.03)	{10.16, 1044.1}	
	Timepoint 2	6	175.5 [127.5, 924.03]	833.44 (1275.81)	{67.12, 3297.5}	

Supplementary Figure S4: FoxP3 Density

A



B

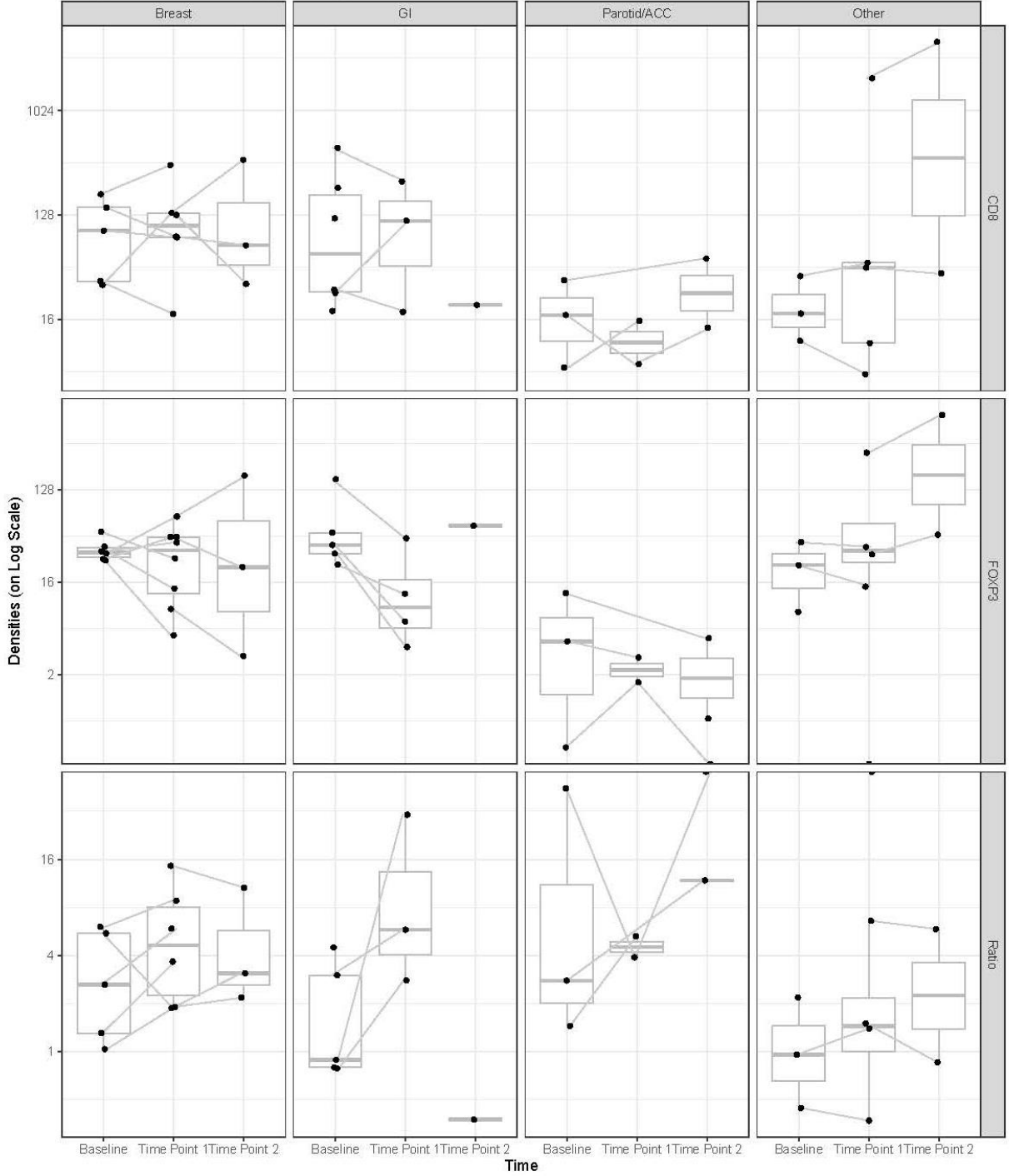


C

Marker	Time Point	n	Density Median [Q1, Q3]	Density Mean (SD)	Density {Min, Max}	P-value*
FoxP3 (All dose levels)	Baseline	26	17.72 [8.29, 35.5]	26.56 (27.83)	{0.77, 114.96}	
	Timepoint 1	28	14.38 [5.2, 39.61]	30.78 (44.39)	{0.4, 216.64}	
	Timepoint 2	14	13.42 [3.29, 79.55]	78.28 (151.6)	{1.38, 576.73}	
FoxP3 (Dose Level 1/2)	Baseline	11	8.39 [2.83, 12.8]	12.13 (14.88)	{0.77, 53.67}	0.008
	Timepoint 1	13	12.53 [2.24, 26.57]	19.88 (26.18)	{0.53, 98.17}	0.41
	Timepoint 2	8	8.34 [4.13, 94.58]	47.69 (61.29)	{1.38, 142.17}	0.63
FoxP3 (Dose Level 3/4)	Baseline	15	33.73 [18.22, 46.05]	37.14 (30.68)	{1.03, 114.96}	
	Timepoint 1	15	18.57 [7.55, 49.35]	40.23 (54.83)	{0.4, 216.64}	
	Timepoint 2	6	30.8 [5.78, 65.07]	119.06 (225.85)	{2.09, 576.73}	

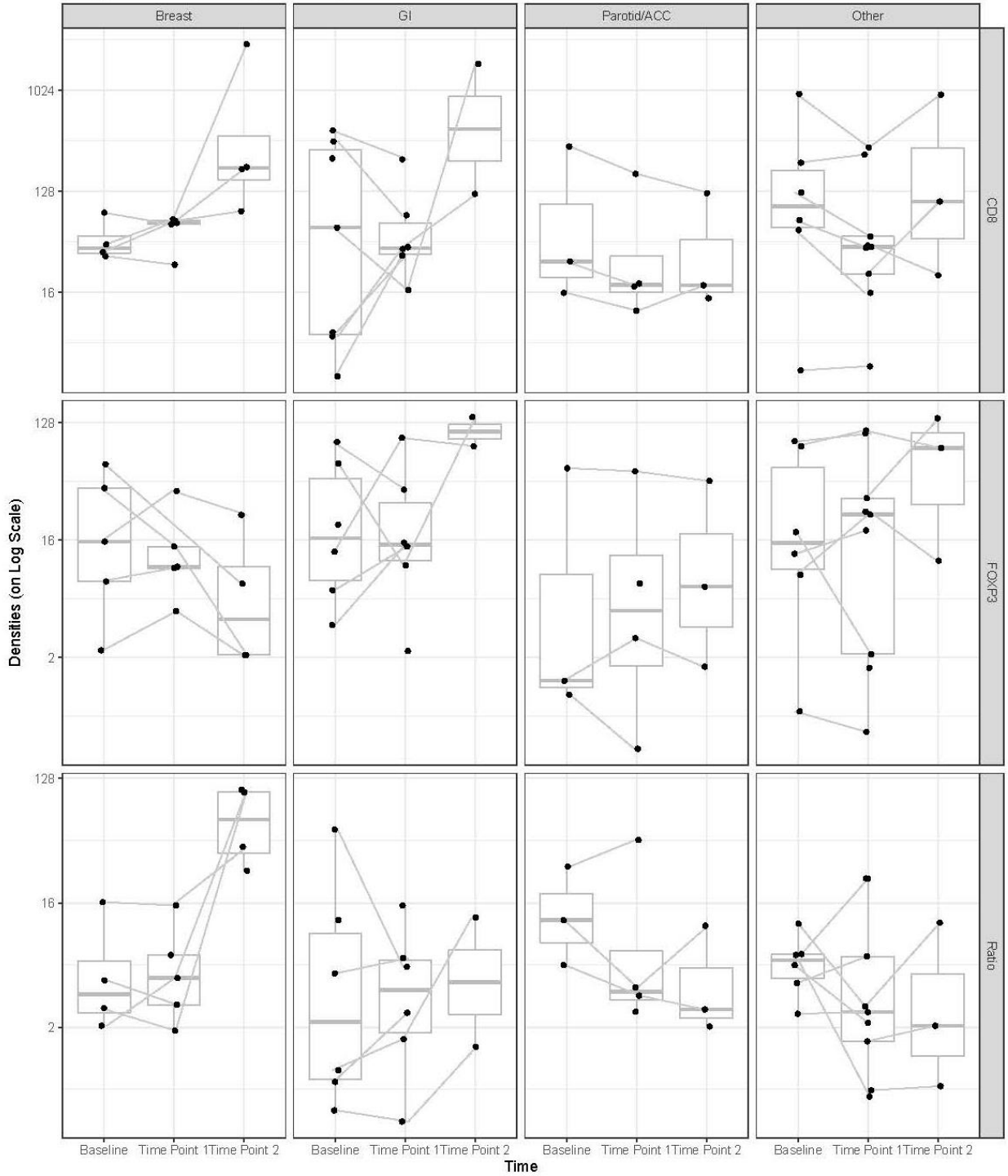
Supplementary Figure S5: CD8, FoxP3 and ratio by tumor type in 'cancer' ROI

CD8, FoxP3 and Ratio by Tumor Type in 'Cancer' ROI

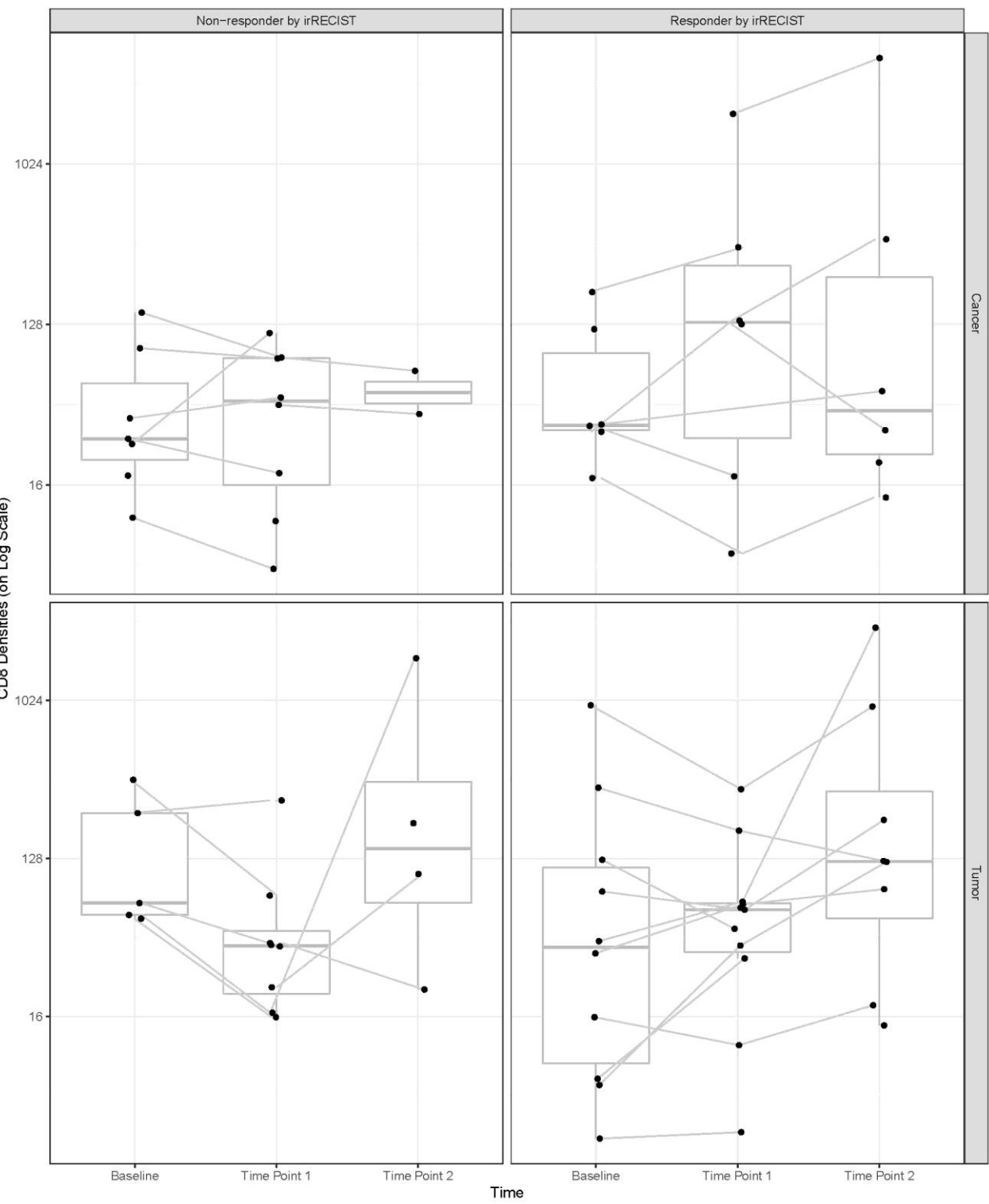


Supplementary Figure S6: CD8, FoxP3 and ratio by tumor type in 'tumor' ROI

CD8, FoxP3 and Ratio by Tumor Type in 'Tumor' ROI



Supplementary Figure S7: CD8, density in 'cancer' vs. 'tumor' ROIs



Supplementary Figure S8: PD-L1 and IDO Staining

