Supplemental Table 1

	Age at Diagnosis	Age at Study Enrollment	Sex	KPS at Diagnosis	Location	Prior Immunotherapy	Prior Chemotherapy	Initial Surgery	Recurrence #	Study Surgery	Study Dose	Progression at Time of Publication	Alive at the Time of Publication	Progression Free Survival	Overall Survival	On Cycle # when stopped	1p Status	19q Status	IDH Mutation Status	MGMT Methylation Status	Ki 67 Percent	EGFR Amplification	P53 Percent Reactivity Percent
1	56	57	M	90	Right frontal	No	Yes	Biopsy	1	STR	300	Yes	No	5.5	17.5	5	Loss	Intact	Wild Type	Unmethylated	40	No	10
2	64	65	M	80	Left parietal	No	No	NTR	1	NTR	150	Yes	No	9.2	14.1	10	Loss	Loss	Wild Type	Unmethylated	70	Yes	25
3	67	70	F	90	Left occipital	Yes	No	NTR	2	NTR	300	Yes	No	1.8	29.7	2	Intact	Intact	Wild Type	Methylated	50	Yes	25
4	63	64	F	80	Left frontal	Yes	No	GTR	1	NTR	150	Yes	No	5.3	35.4	5	Intact	Intact	Wild Type	Unmethylated	50	Yes	10
5	38	40	F	90	Right frontal	No	Yes	GTR	2	GTR	150	No	Yes	27.8	36.6	30	NA	NA	Mutated	Methylated	12	NA	75
6	58	59	M	90	Right temporal	No	Yes	Biopsy	2	NTR	300	Yes	No	5.8	22.1	6	Intact	Intact	Wild Type	Unmethylated	40	Yes	5
7	58	59	M	80	Right frontal	No	No	NTR	1	GTR	150	Yes	No	5.1	14.9	4	NA	NA	Wild Type	Methylated	30	NA	NA
8	Removed from trial after surgical pathology results showed no disease progression																						
9	56	58	M	90	Right parietal	No	No	GTR	1	GTR	450	Yes	No	1.8	11.9	2	Intact	Intact	Wild Type	Unmethylated	70	Yes	10
10	60	61	F	80	Left frontal	Yes	Yes	GTR	2	NTR	450	Yes	No	8.5	21.6	9	Intact	Intact	Wild Type	Methylated	9	No	10
11	45	46	F	90	Left Parietal	No	No	GTR	1	STR	450	No	Yes	13.9	22.3	14	Intact	Loss	Wild Type	Methylated	80	No	5
12	48	49	M	90	Right temporal	No	No	Laser	1	GTR	450	Yes	Yes	6.2	12.9	7	Intact	Intact	Wild Type	Unmethylated	40	No	20

Abbreviations: M: male; F: female; KPS: Karnofsky Performance Scale; STR: subtotal resection; NTR: near-total resection; GTR: gross-total resection; IDH: isocitrate dehydrogenase; MGMT: O-6-methylguanine-DNA methyltransferase; EGFR: epidermal growth factor receptor

Supplemental Table 2

Required Assessments	Pre- study	Pre-op	Post op (Day 1)	Cycle 1 (Day 1)[1]	Cycle 2+ (Day 1)[1]	End of Treatment	30-Day Follow up[10]
Informed Consent	X						
Demographics	X						
Medical History	X			X	X	X	X
Weight	X	X[11]		X	X	X	X
Vitals	X	X[11]		X	X	X	X
Physical Exam	X			X	X	X	X
Con Meds	X			X	X	X	X
KPS	X			X	X	X	X
Baseline Symptoms	X						
AE Assessment	X	X[11]		X	X	X	X
CBC/diff	X			X	X	X	
CMP	X			X	X	X	
Urine P/C ratio	X				X[9]		
PT/INR	X						
Pregnancy test[8]	X						
ECG	X						
MRI[7]	X				X	X	
Capecitabine		X[3]		X	X		
Bevacizumab					X[2]		
Correlative Studies		X[4,5,12]	X	X[4]	X[4,6]		

1 – ± 3 days
2 – Days 1 and 15 (± 3 days)
3 – Capecitabine to start 5-7 days before surgery with last dose on morning of surgery
4 – Perform up to 3 days before starting chemotherapy
5 – Tissue studies on resected specimen
6 – Repeat through Cycle 6 and thereafter at the discretion of the investigator
7 – MRI to be done with gadolinium. Repeat MRI before (up to 5 days) even cycles beginning with Cycle 2. Perfusion MRI scanning will be done according to the discretion of the treating investigator.
8 – Only if not done pre-op and if child-bearing potential; serum or urine test allowed
9 – Omit test on Cycle 2, Day 1
10 – ± 2 weeks
11 – May be combined with Pre-study assessments
12 – Blood sample preoperatively on day of surgery

Supplemental Fig. 1

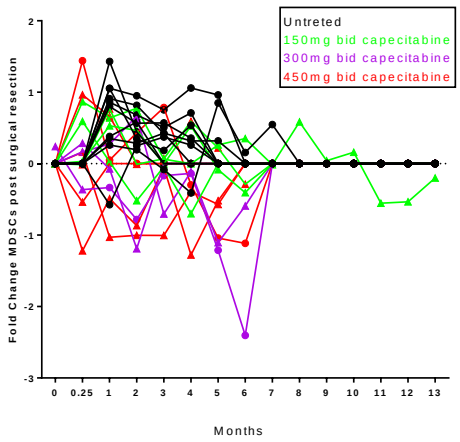
A

Peripheral blood assessment

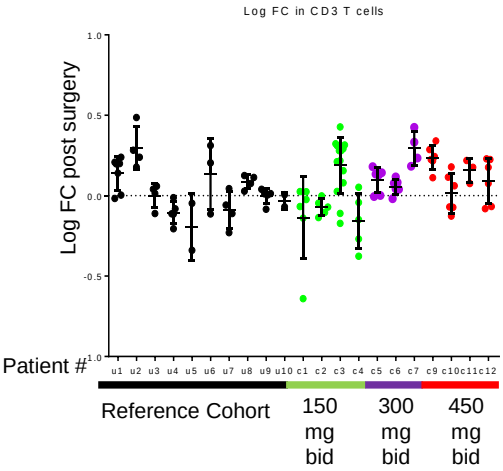
MDSC panel		
Ab	Fluorophore	cat #
CD11b	AF700	CD11b29
HLA-DR	APC	559866
CD14	APC H7	560180
CD15	PerCP	555400
CD33	PE	555450

T cell panel		
Ab	Fluorophore	Cat #
CD4	PerPC	347324
CD3	488	555332
CD25	PE	555432
CD8	PE cy7	557746
CD107a	APC-H7	561343
Cd127	Af647	558598

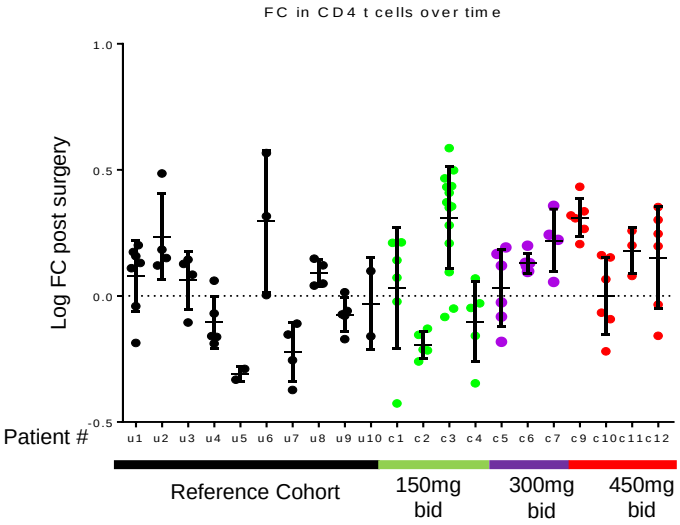
B



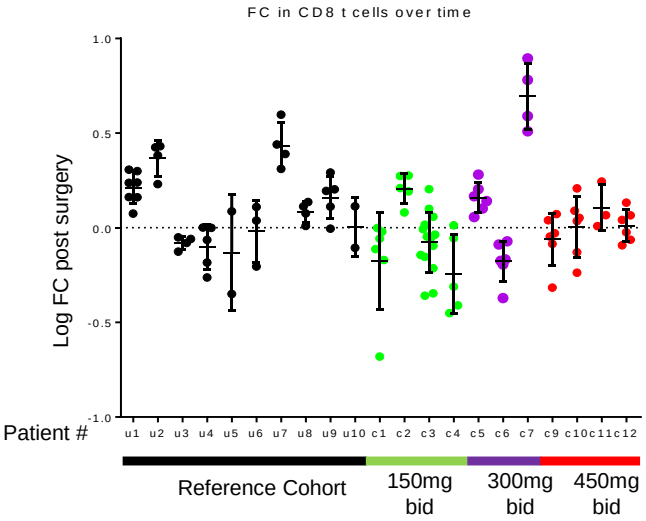
C



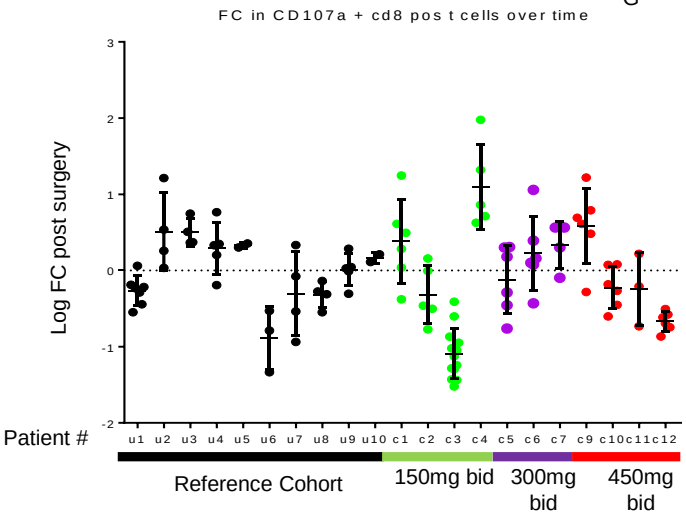
D



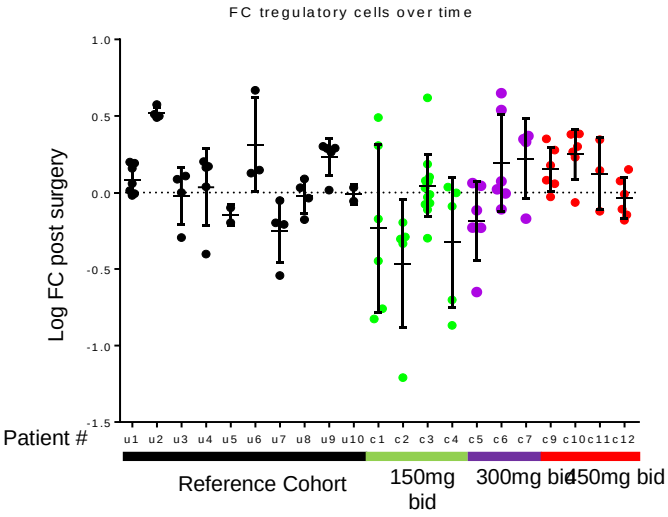
E



F



G

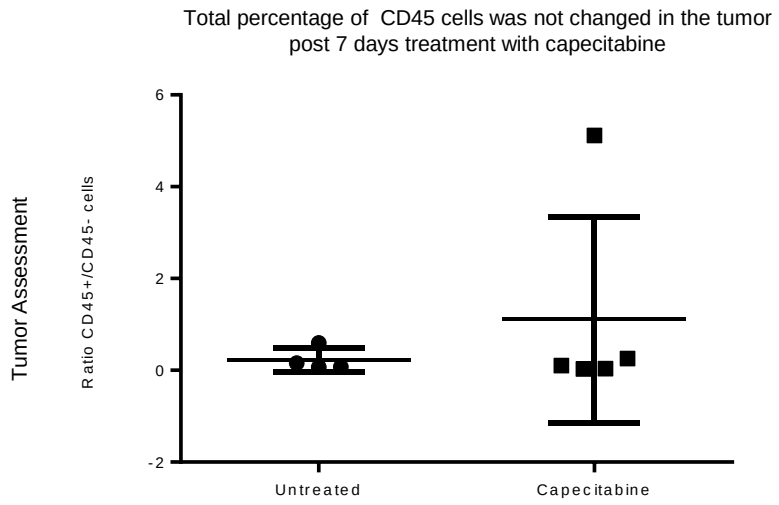


Supplemental Fig. 2

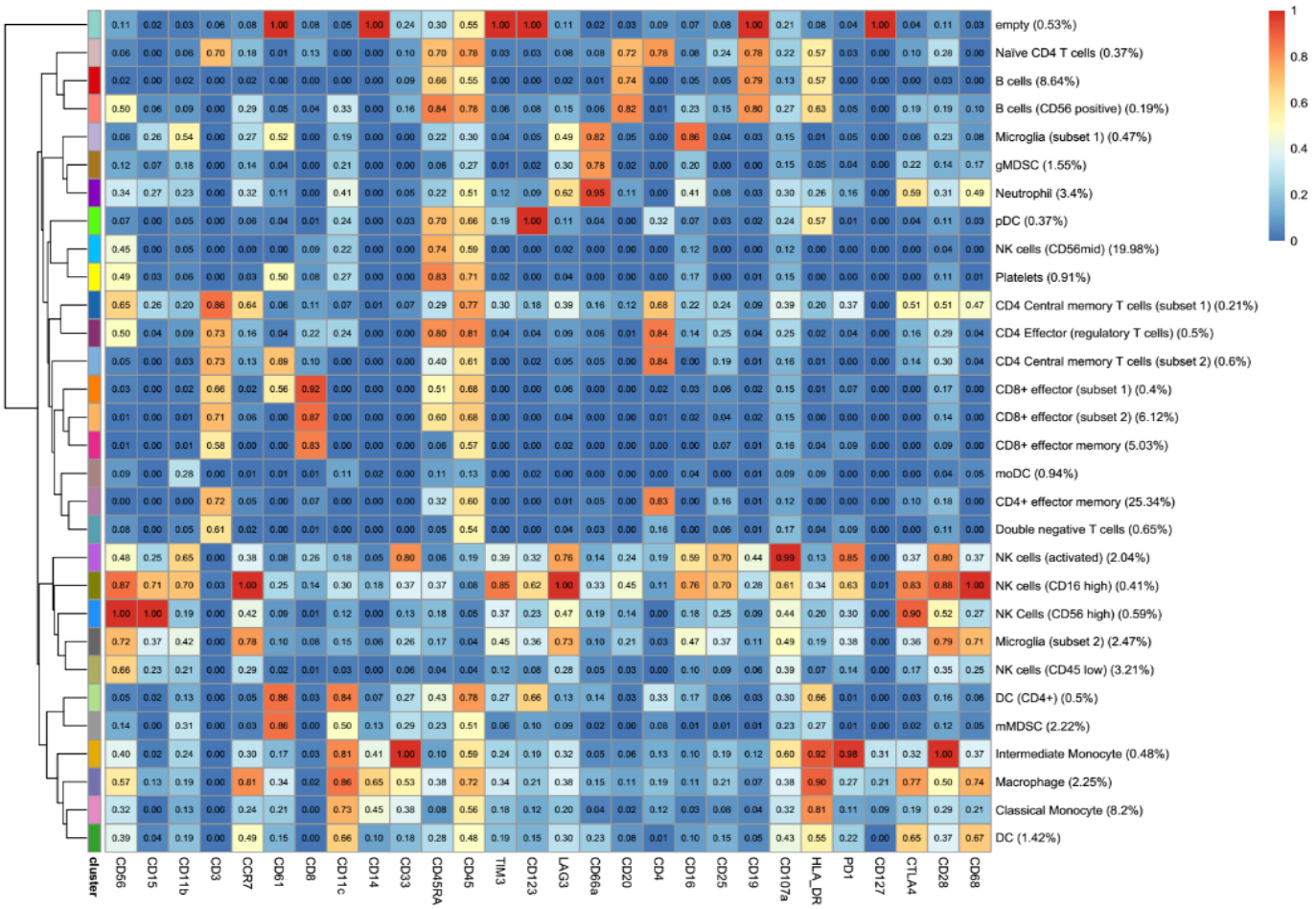
A

label	target	Clone #	Cat #
209Bi	CD11b (Mac-1)	ICRF44	3209003B
170Er	CD3	UCHT1	3170001B
167Er	CD197 (CCR7)	G043H7	3167009A
165Ho	CD61	VI-PL2	3165010B
164Dy	CD15 (SSEA-1)	W6D3	3164001B
163Dy	CD56 (NCAM)	NCAM16.2	3163007B
146Nd	CD8a	RPA-T8	3146001B
159Tb	CD11c	Bu15	3159001B
158Gd	CD33	WM53	3158001B
169Tm	CD45RA	HI100	3169008B
89Y	CD45	HI30	3089003B
153Eu	TIM-3	F38-2E2	3153008B
151Eu	CD123 (IL-3R)	6H6	3151001B
150Nd	CD223 (LAG-3)	11C3C65	3150030B
149Sm	CD66a	CD66a-B1.1	3149008B
148Nd	CD16	3G8	3148004B
147Sm	CD20	2H7	3147001B
145Nd	CD4	RPA-T4	3145001B
143Nd	CD25 (IL-2R)	M-A251	555430
142Nd	CD19	HIB19	3142001B
139La	CD107a (LAMP1)	H4A3	328635
174Yb	HLA-DR	L243	3174001B
155Gd	CD279 (PD-1)	EH12.2H7	3155009B
176Yb	CD127 (IL-7Ra)	A019D5	3176004B
160Gd	CD28	CD28.2	3160003B
161Dy	CD152 (CTLA-4)	14D3	3161004B
175Lu	CD14	M5E2	3175015B
171Yb	CD68	Y1/82A	3171011B

B

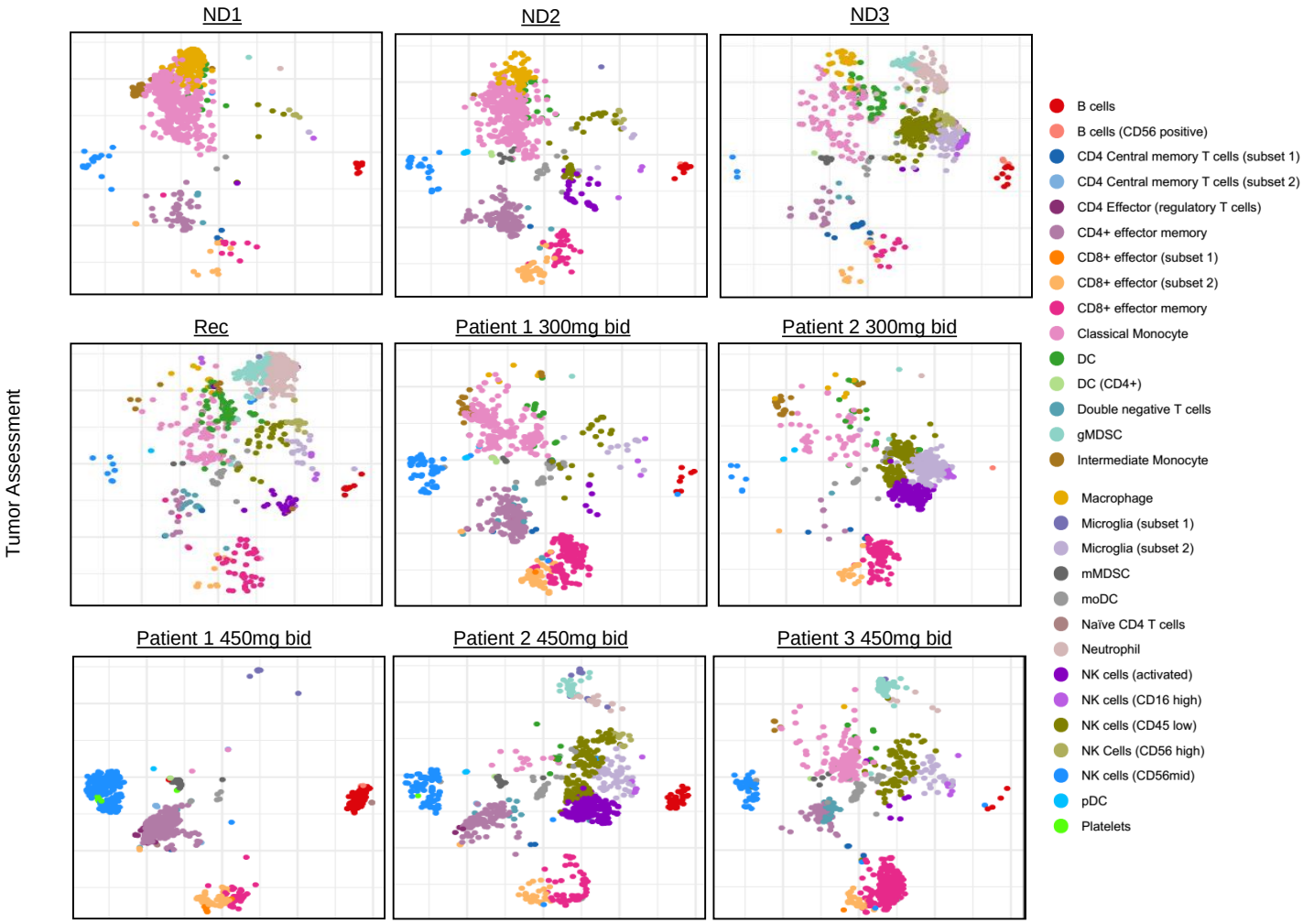


C



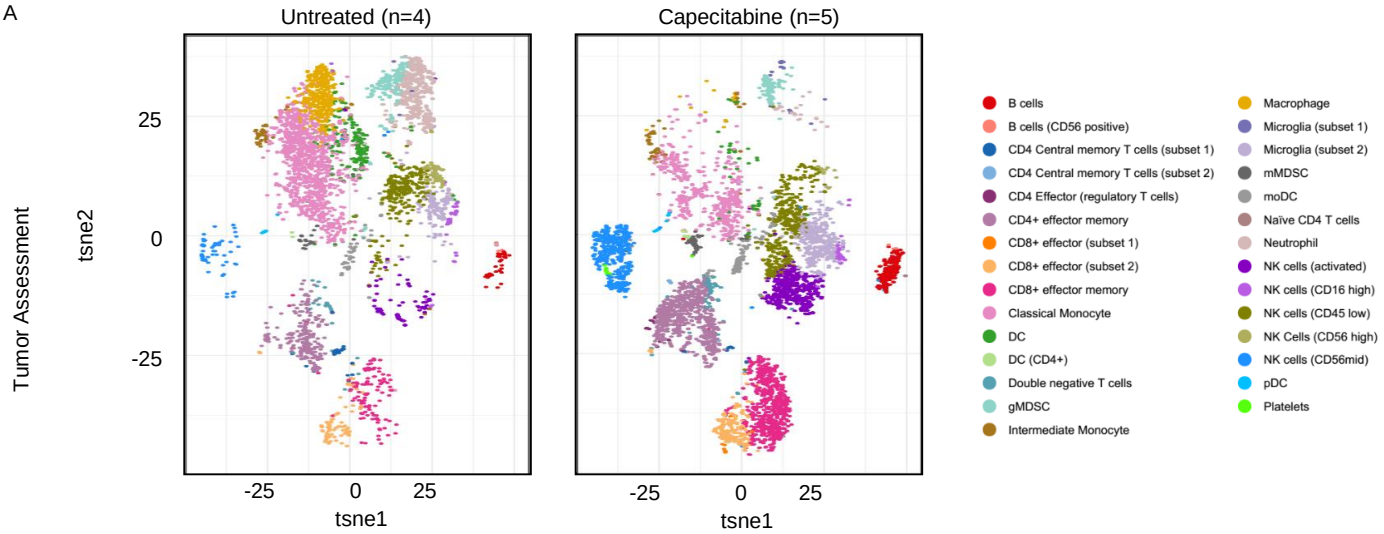
Supplemental Fig. 3

A

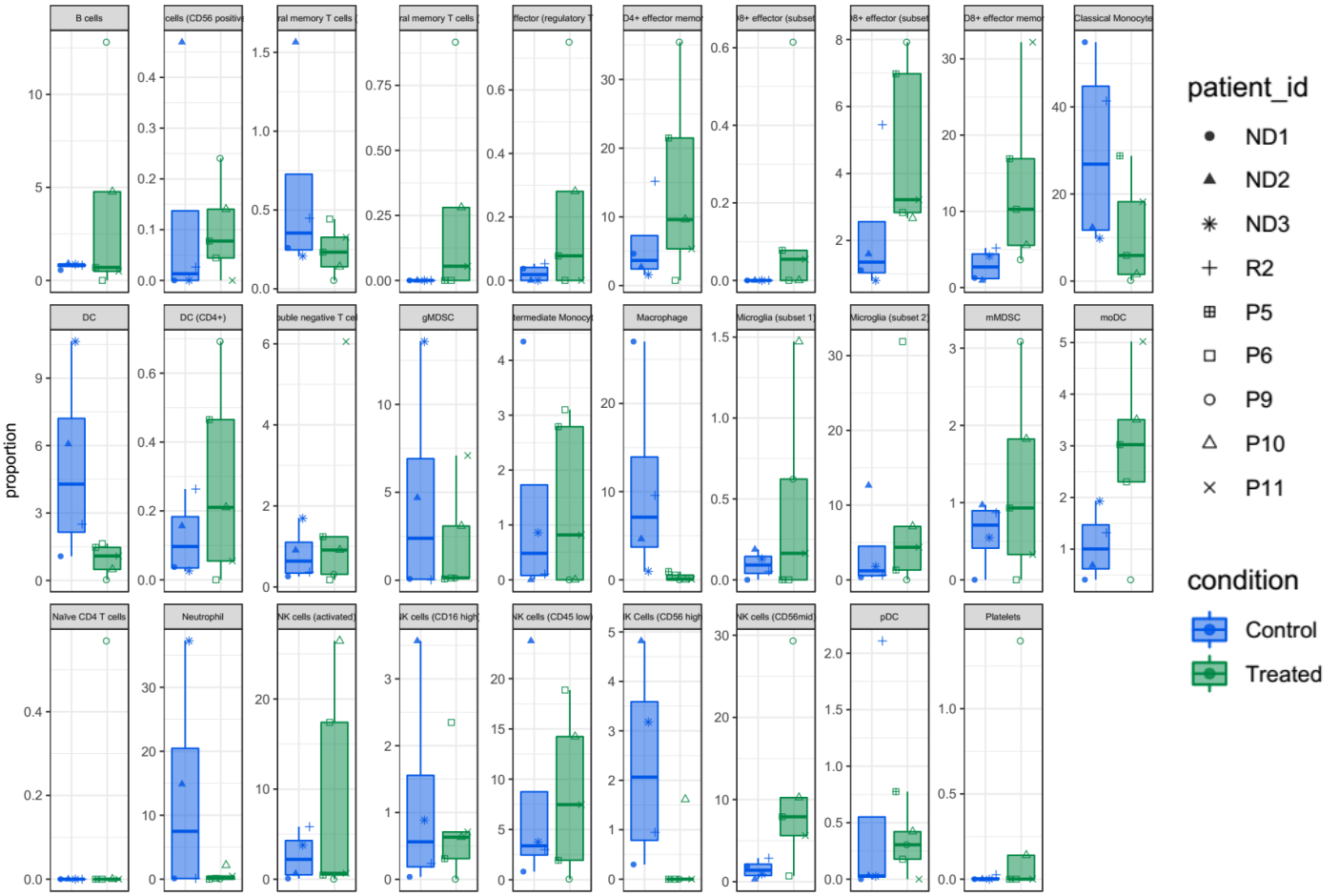


Supplemental Fig. 4

A

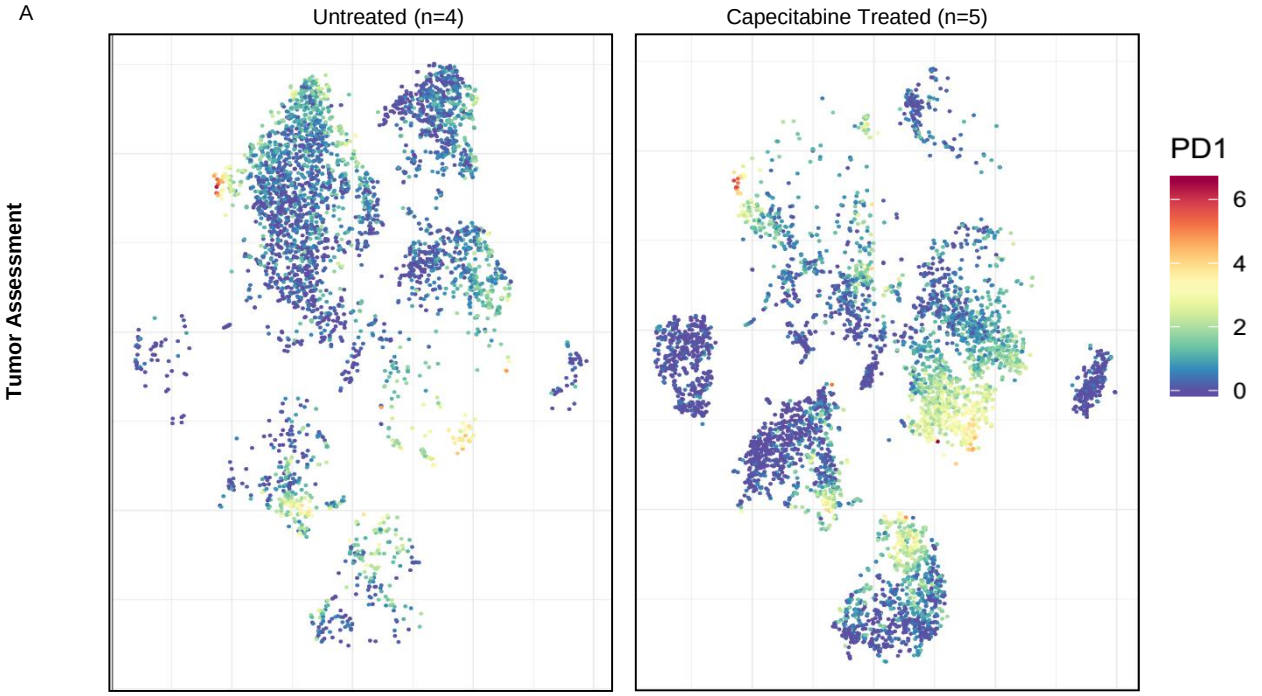


B

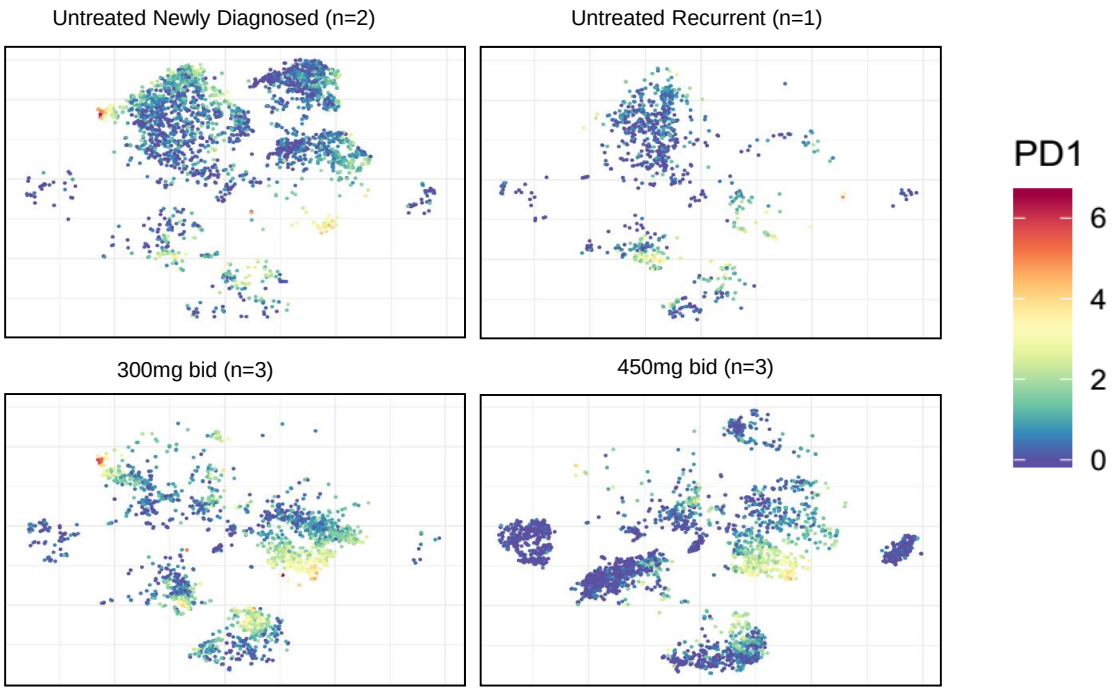


Supplemental Fig. 5

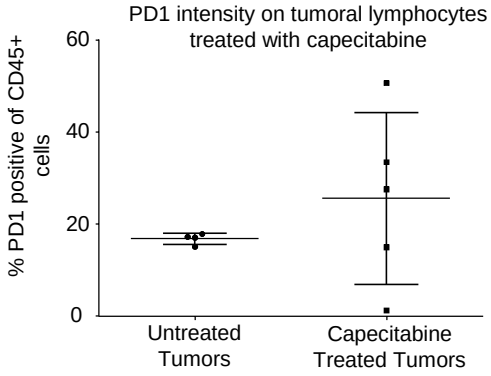
A



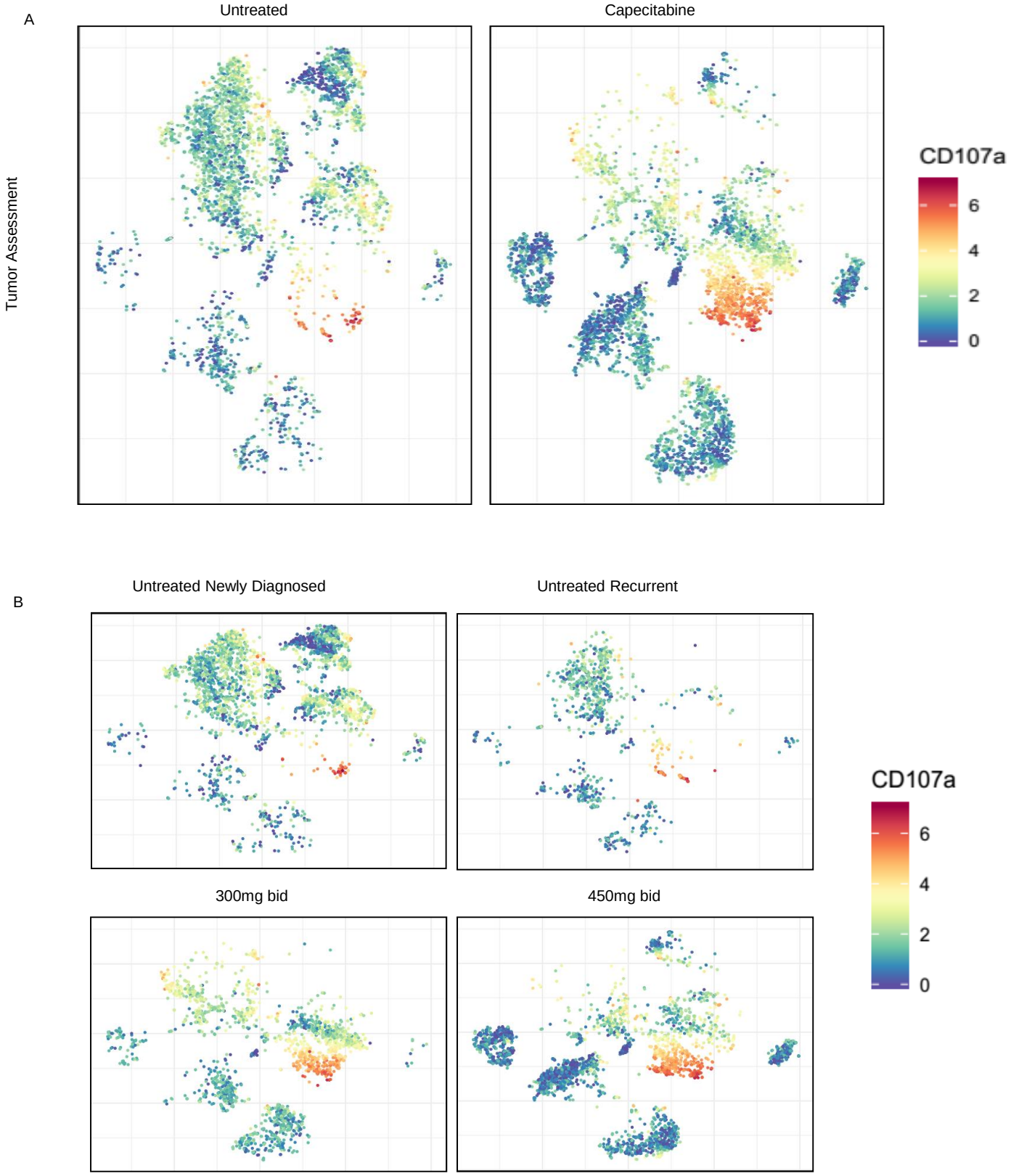
B



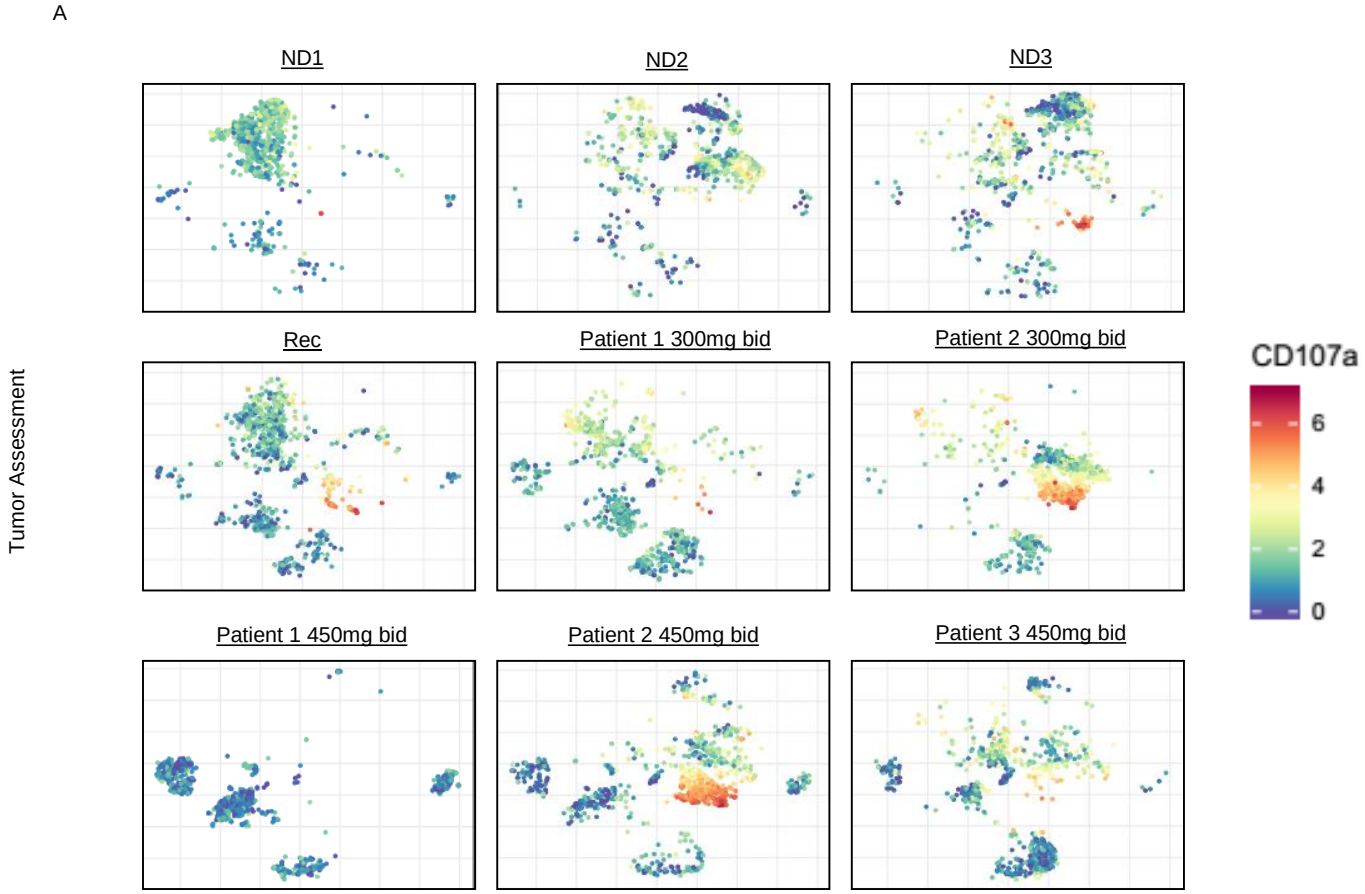
C

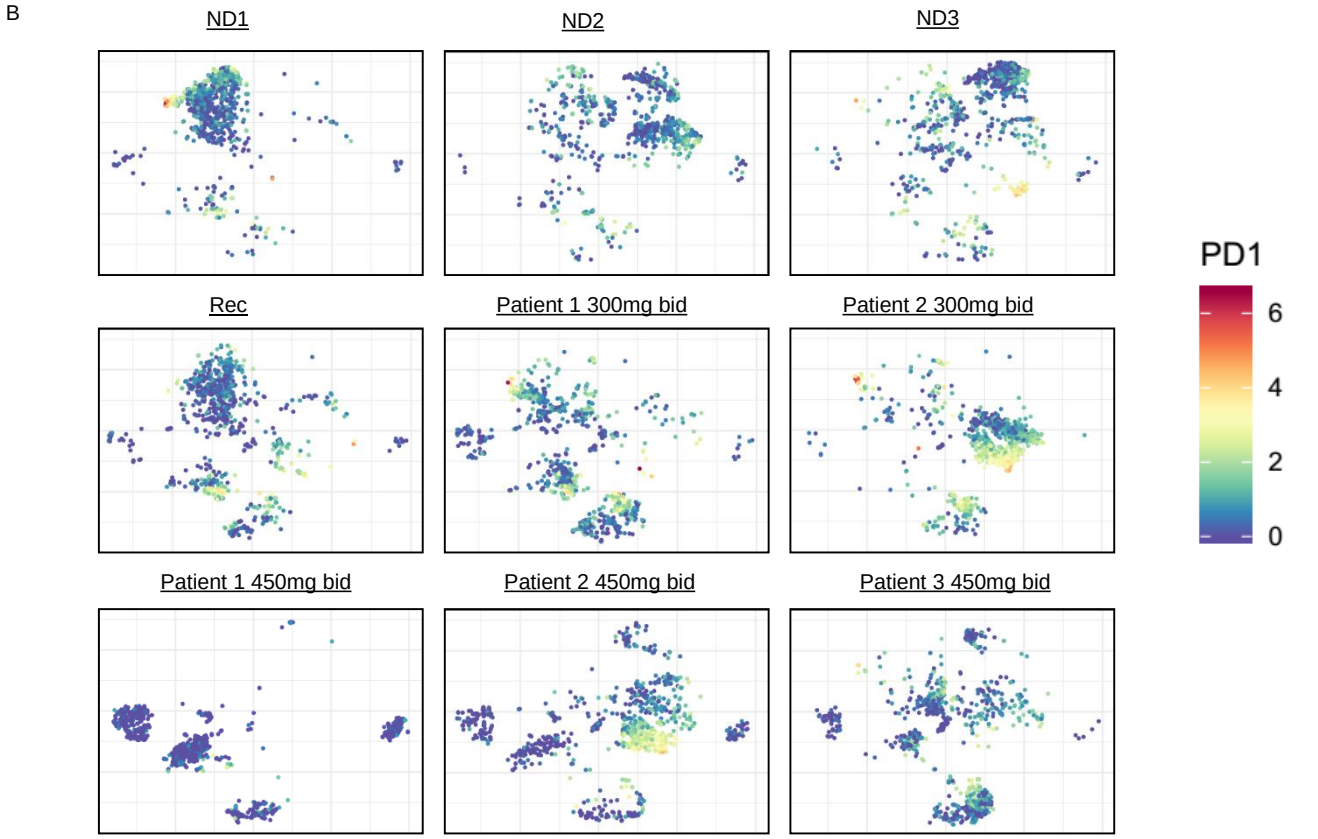


Supplemental Fig. 6



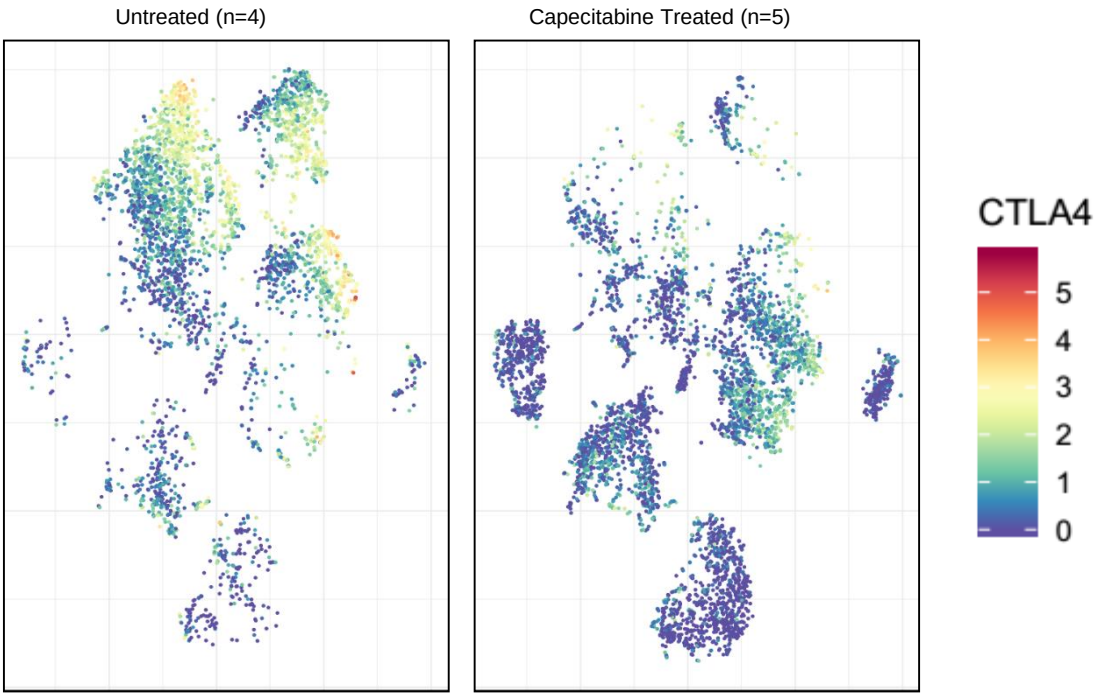
Supplemental Fig. 7



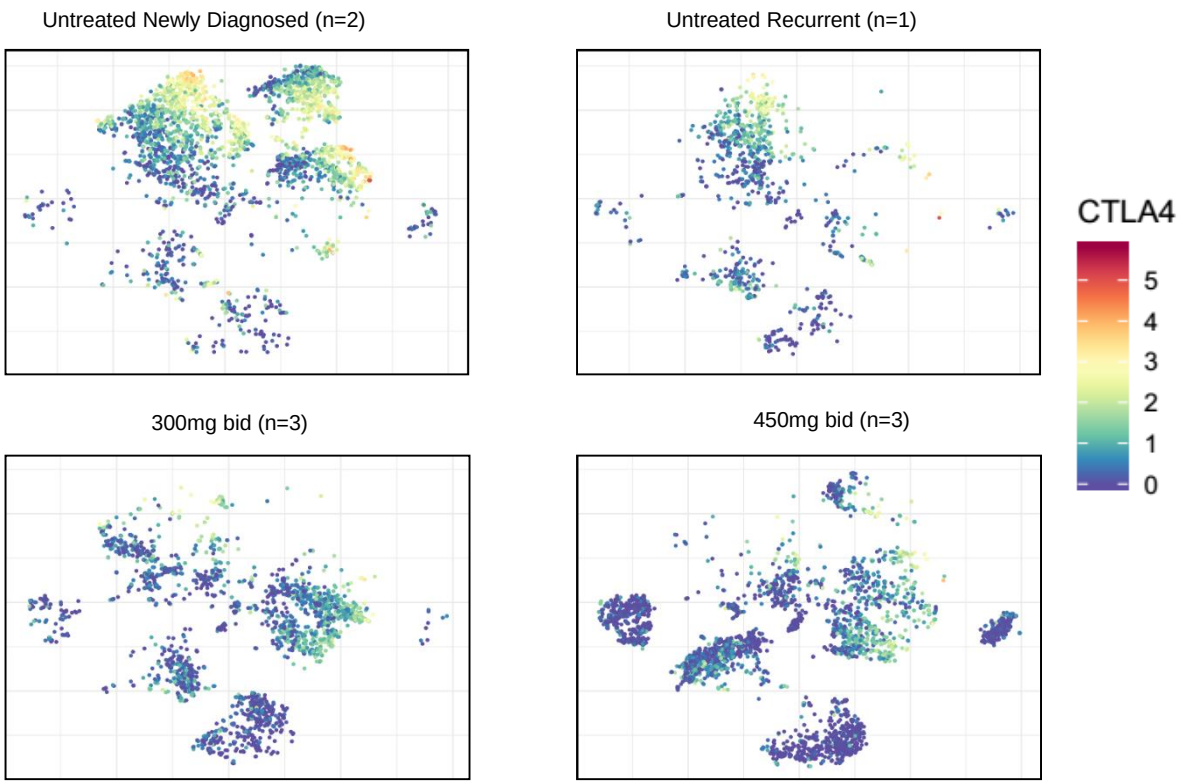


Supplemental Fig. 8

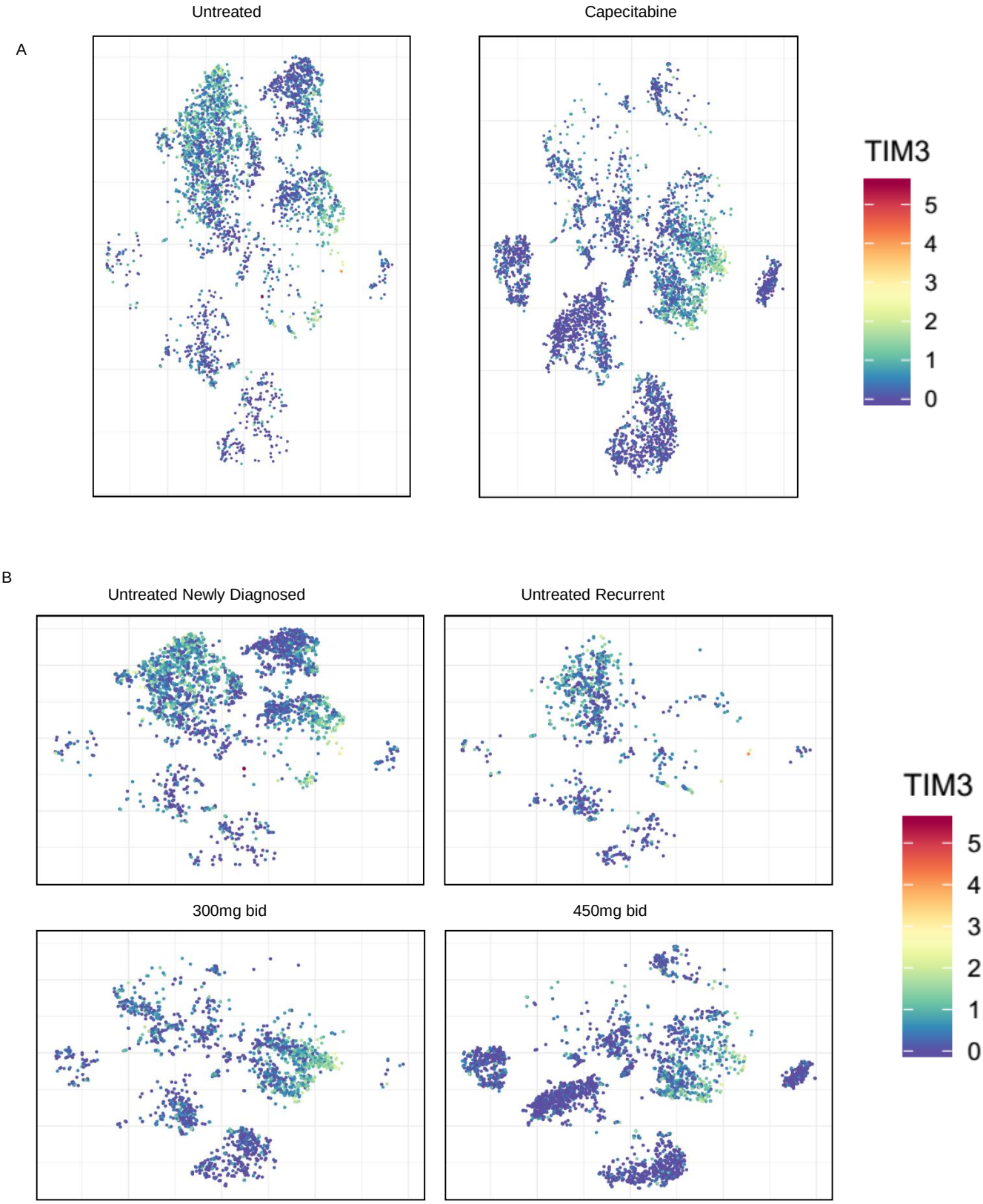
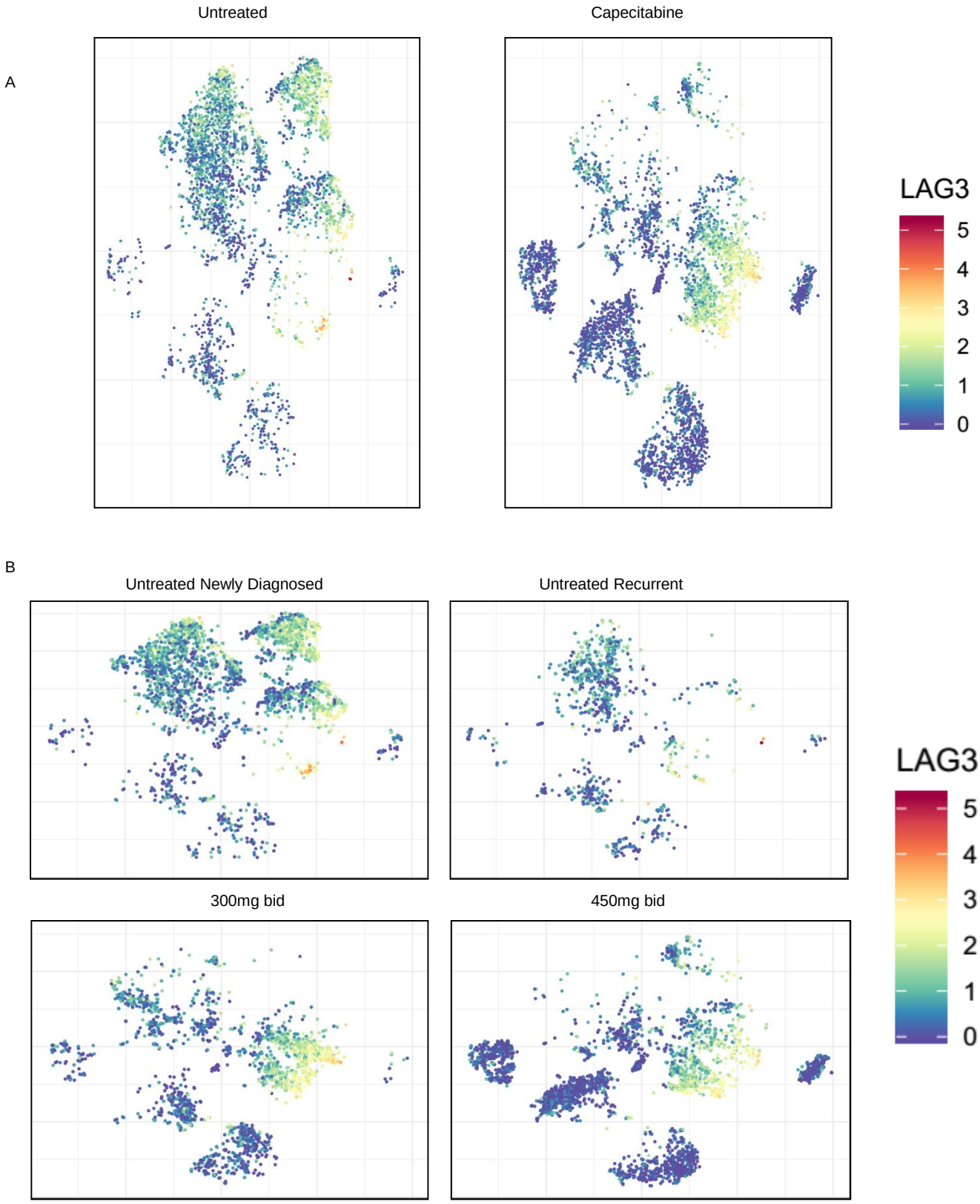
A



B



Supplemental Fig. 9



Supplemental Fig. 10