Supplemental material

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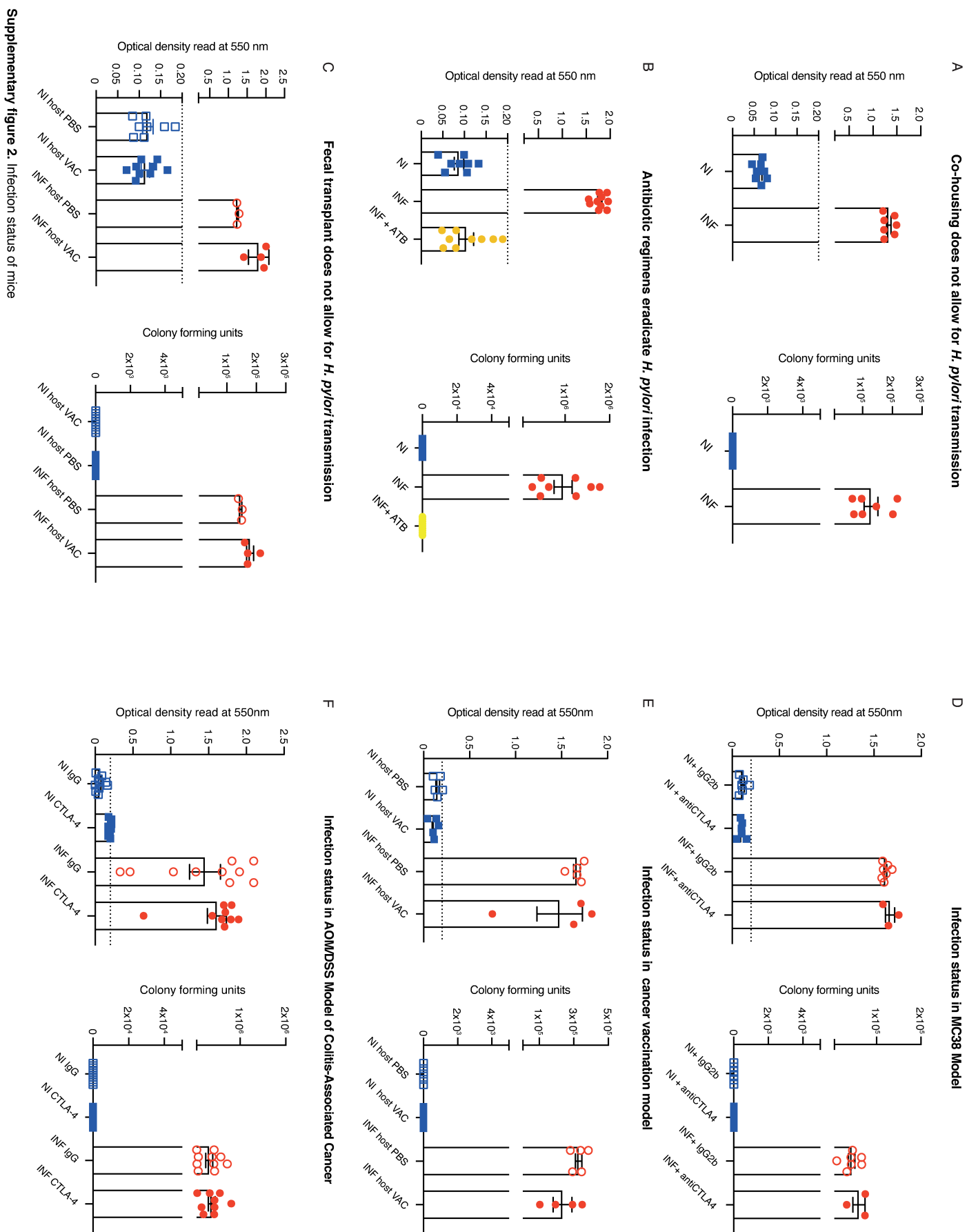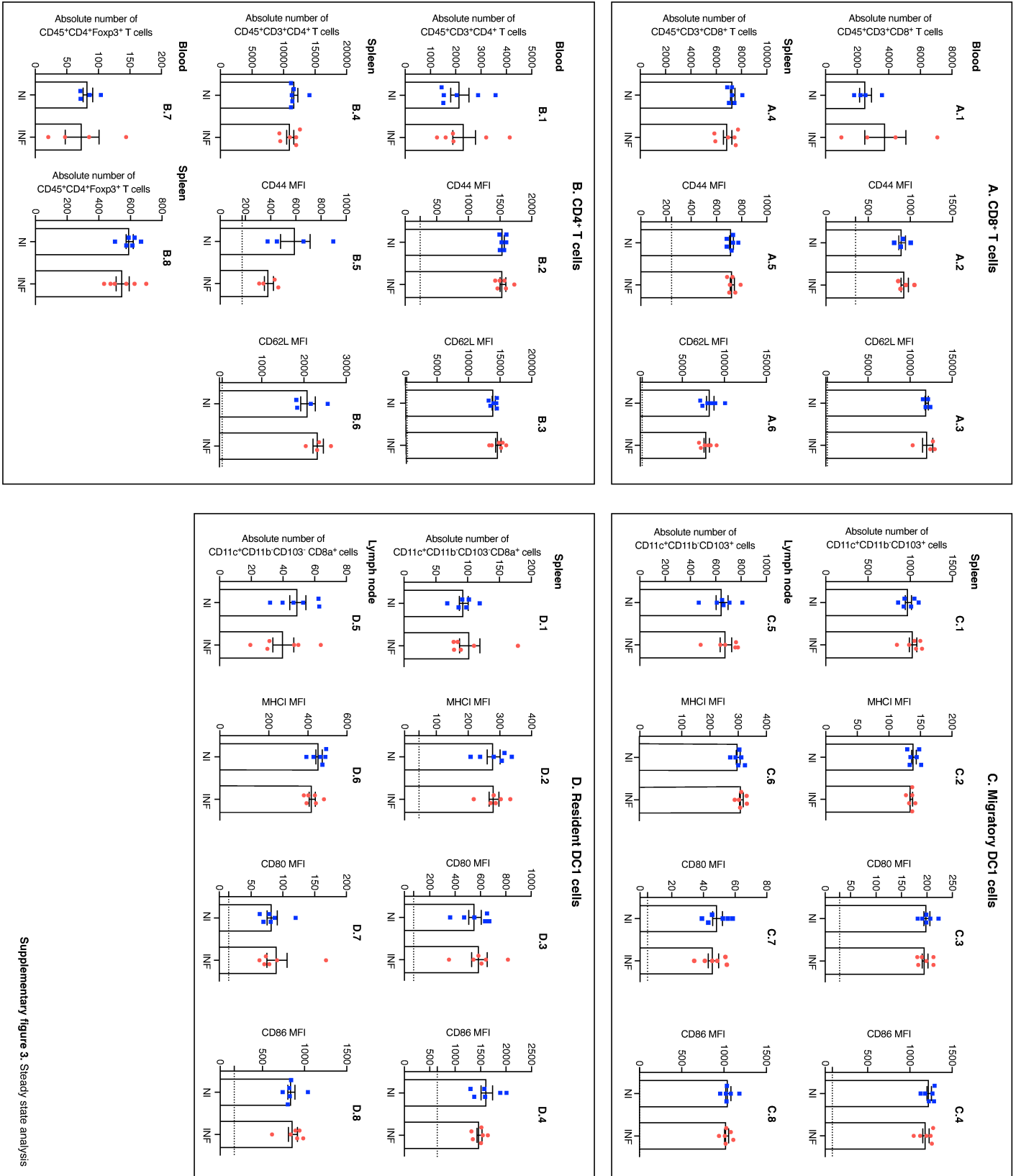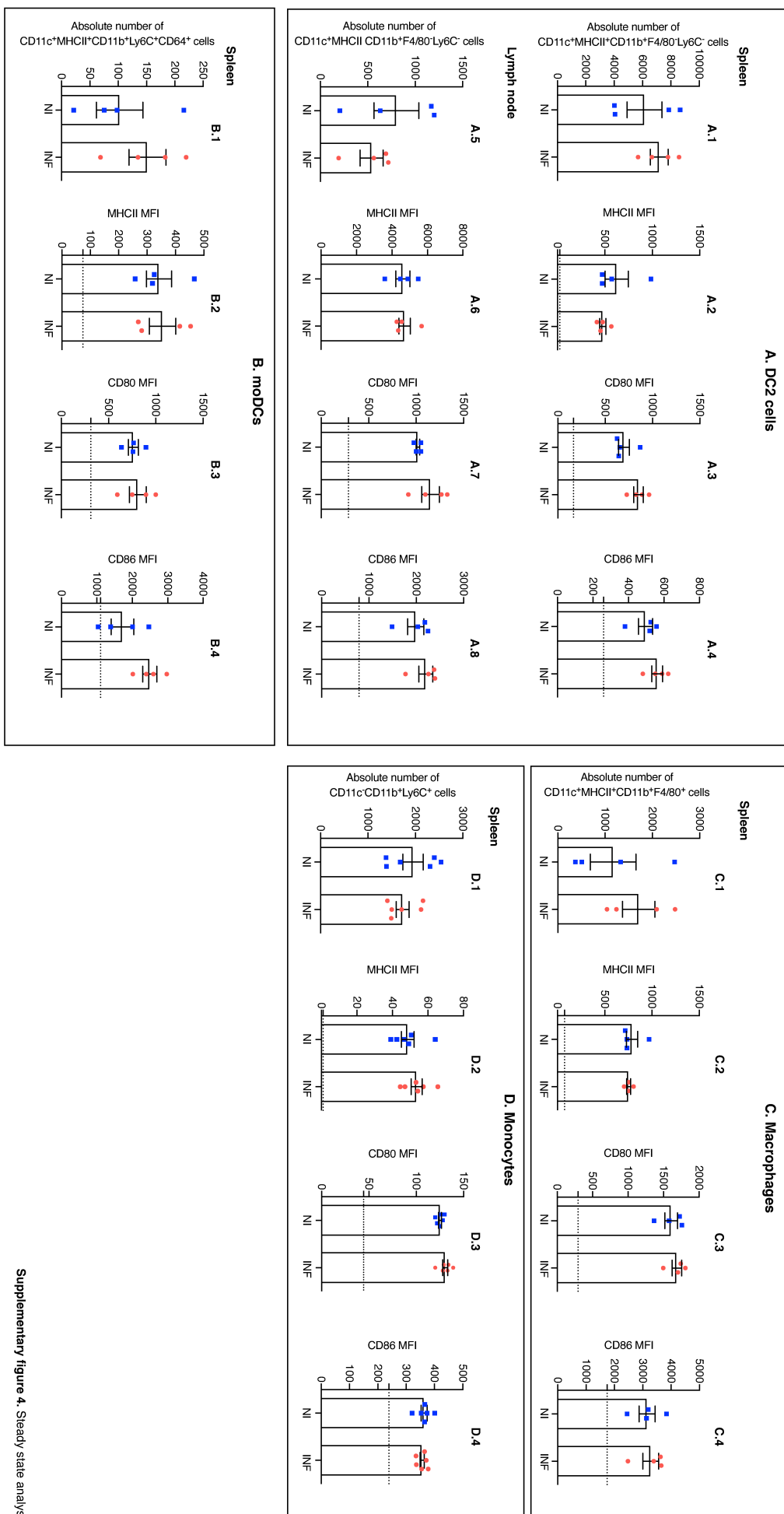
Gut

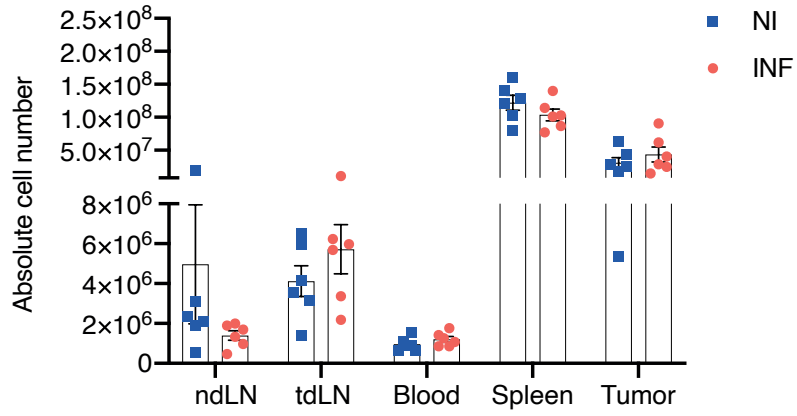**Supplementary figure 1.** Description of the mouse tumor models.

Supplementary figure 2. Infection status of mice

Supplementary figure 3. Steady state analysis

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Supplementary figure 4. Steady state analysis

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Supplementary figure 5. Cell Counts

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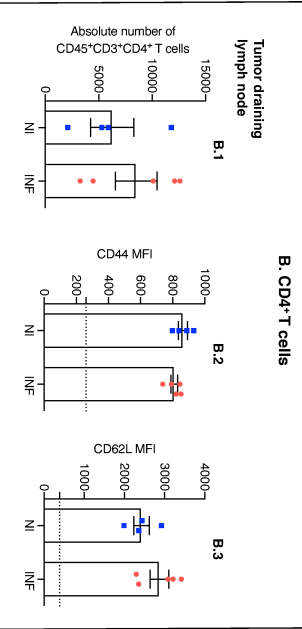BMJ Publishing Group Limited (BMJ) disclaims all liability and responsibility arising from any reliance placed on this supplemental material which has been supplied by the author(s)

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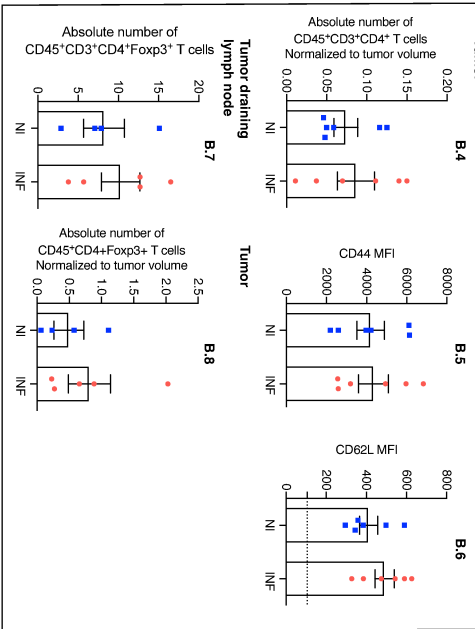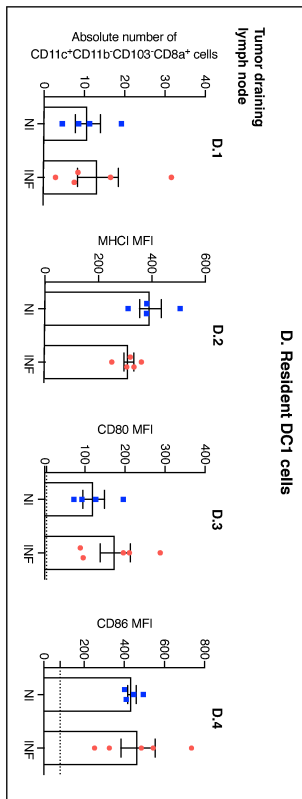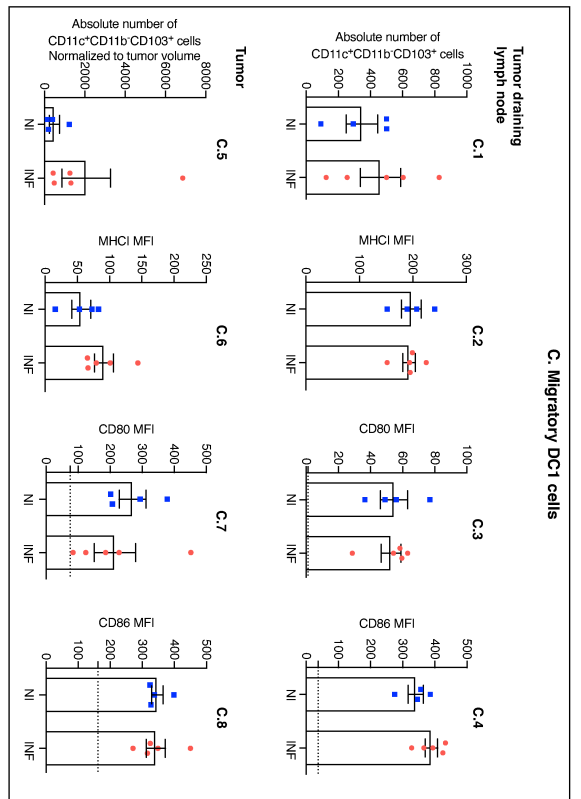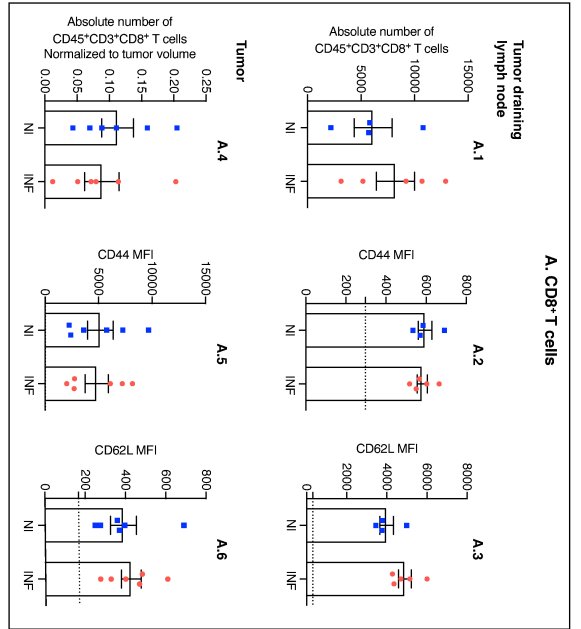
Supplementary figure 6. MC38 Tumor-bearing mice
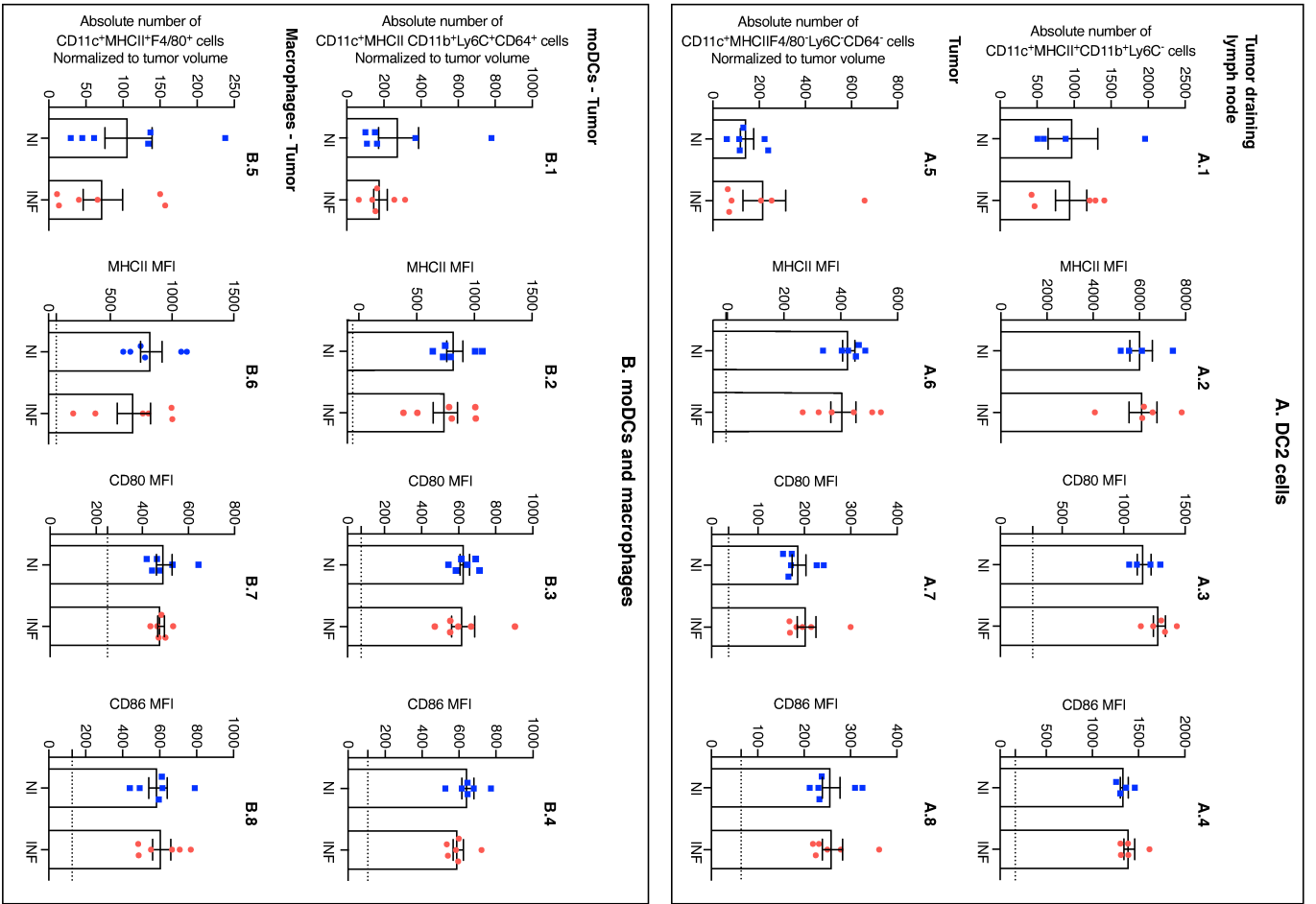
Supplementary figure 7. MC38 Tumor-bearing mice
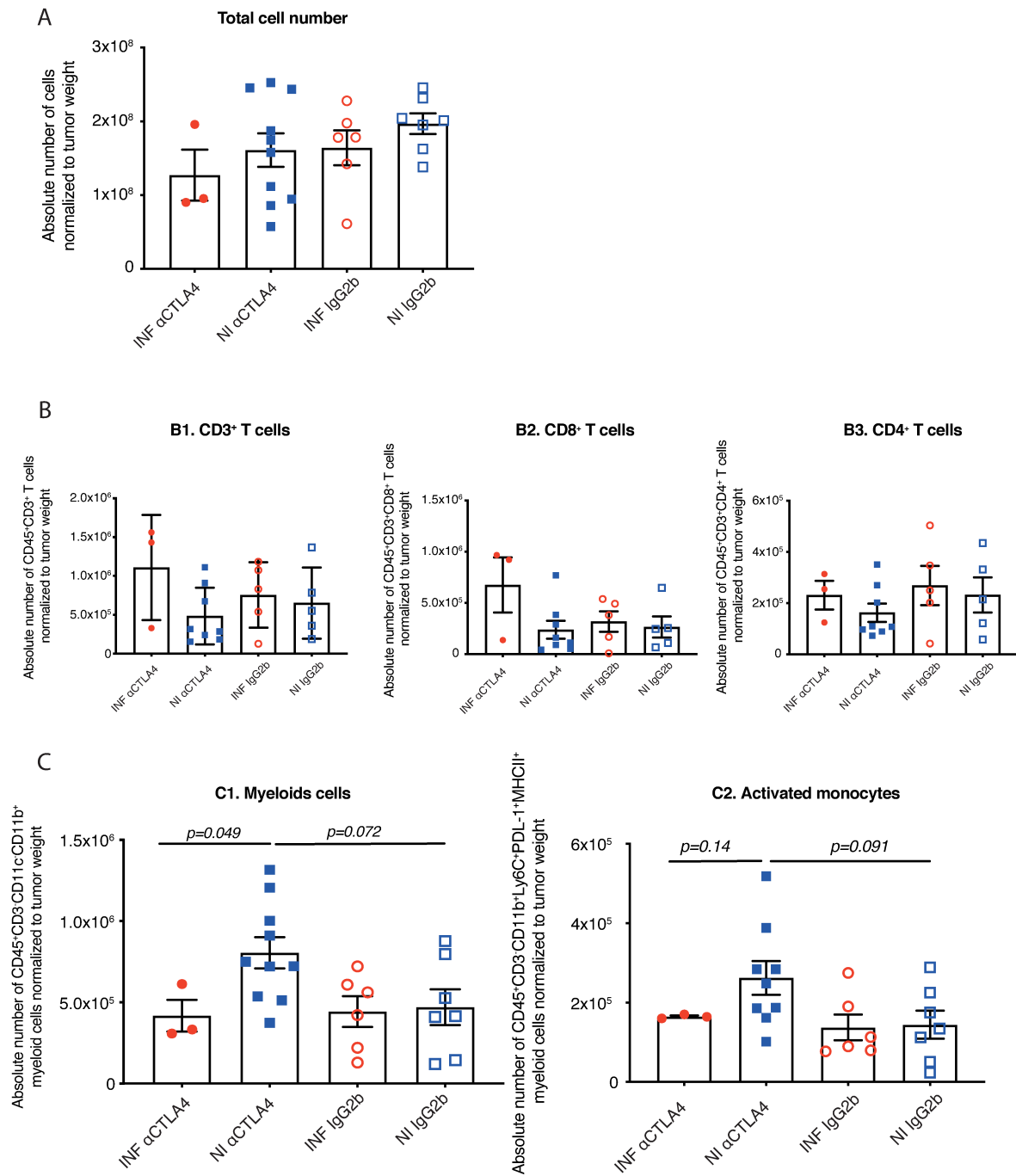
Supplementary figure 8.
H. pylori substantially affects tumor myeloids cells in MC38 tumor-bearing mice undergoing anti-CTLA4 immunotherapy.
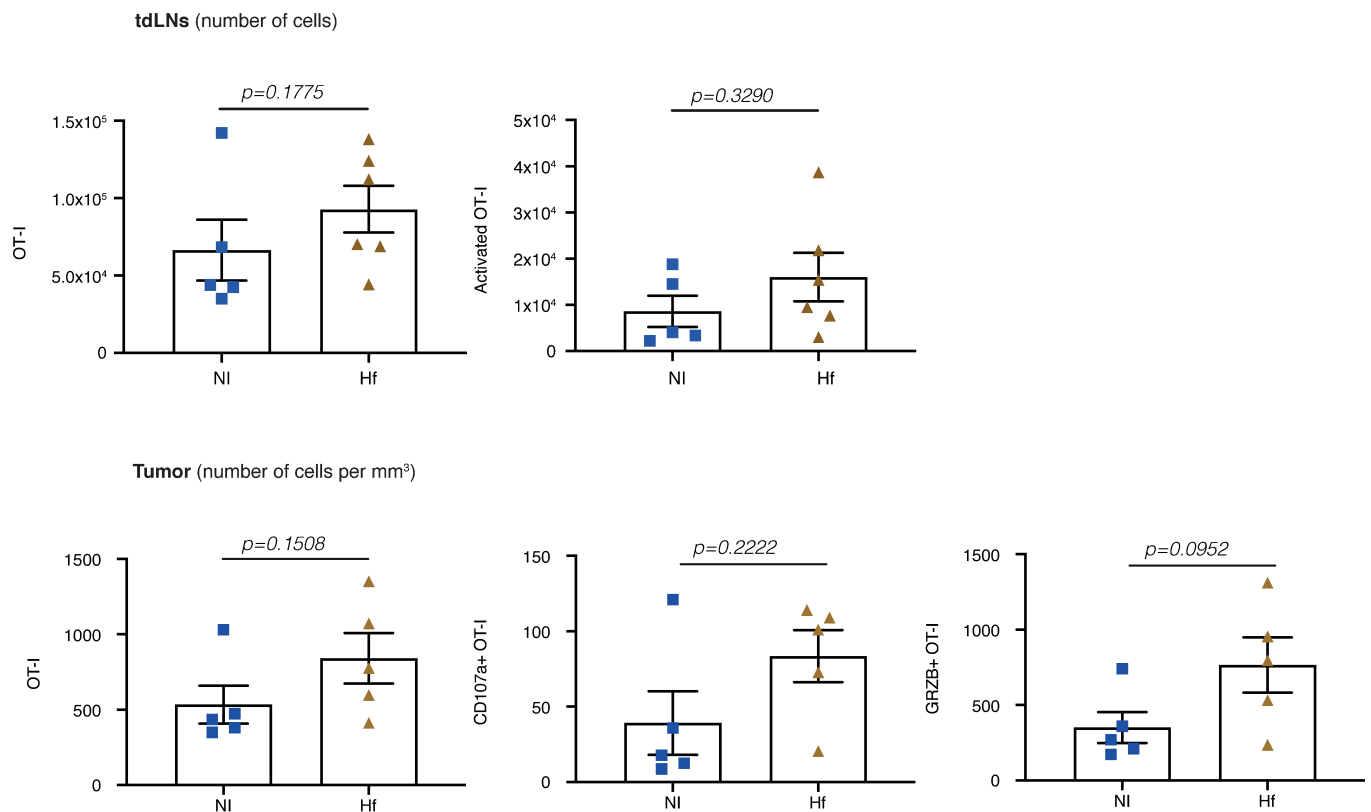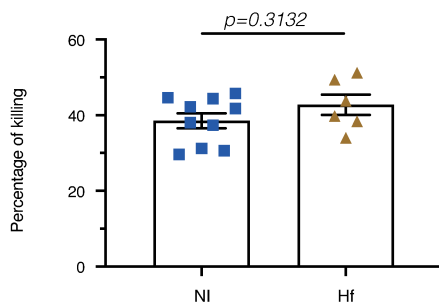
Supplementary figure 9. *H. felis* infection does not jeopardize the tumor specific immune response
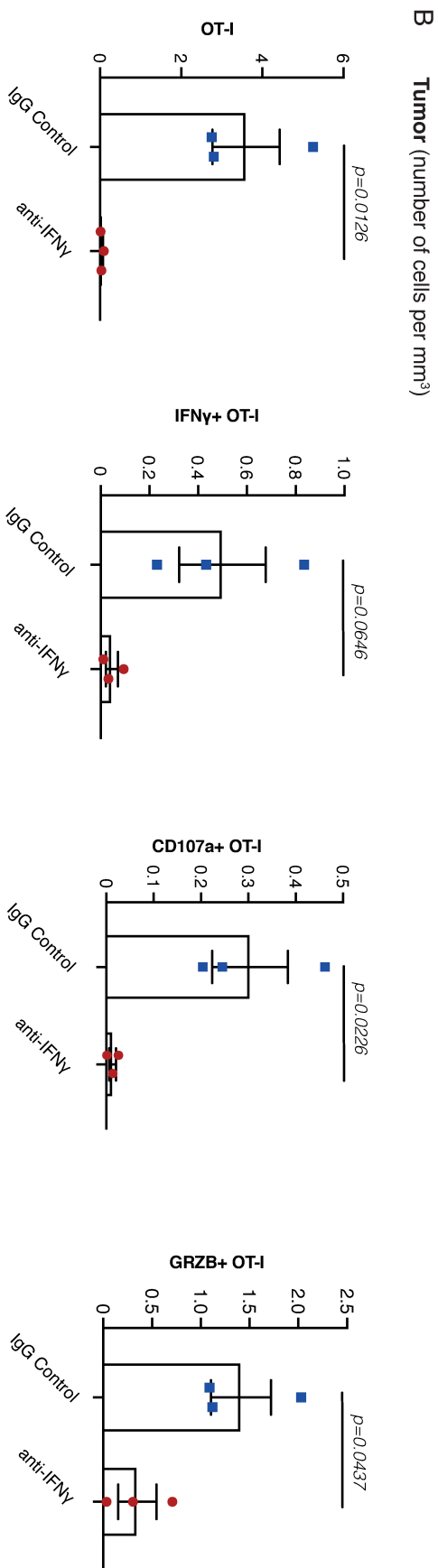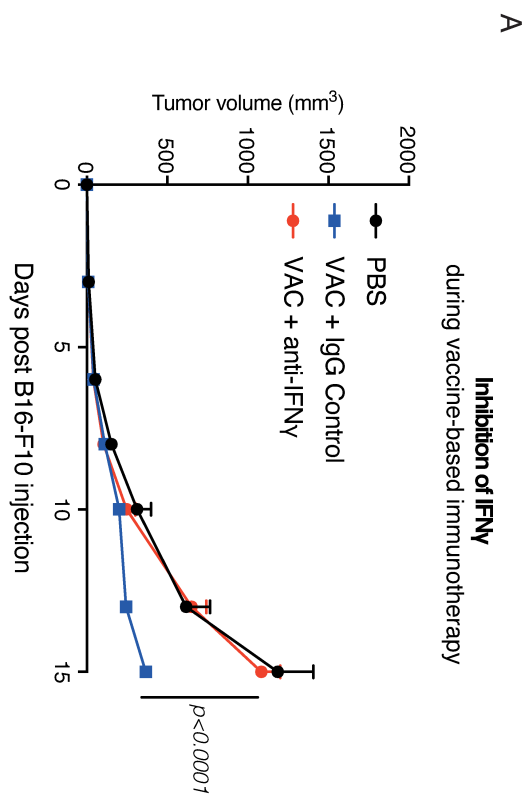
Supplementary figure 10. Effect of neutralization of IFNγ on the efficacy of vaccine-based cancer immunotherapy

Supplementary figure 11. Gating strategy

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Supplementary table 1. Summary of clinical characteristics of the Dijon cohort

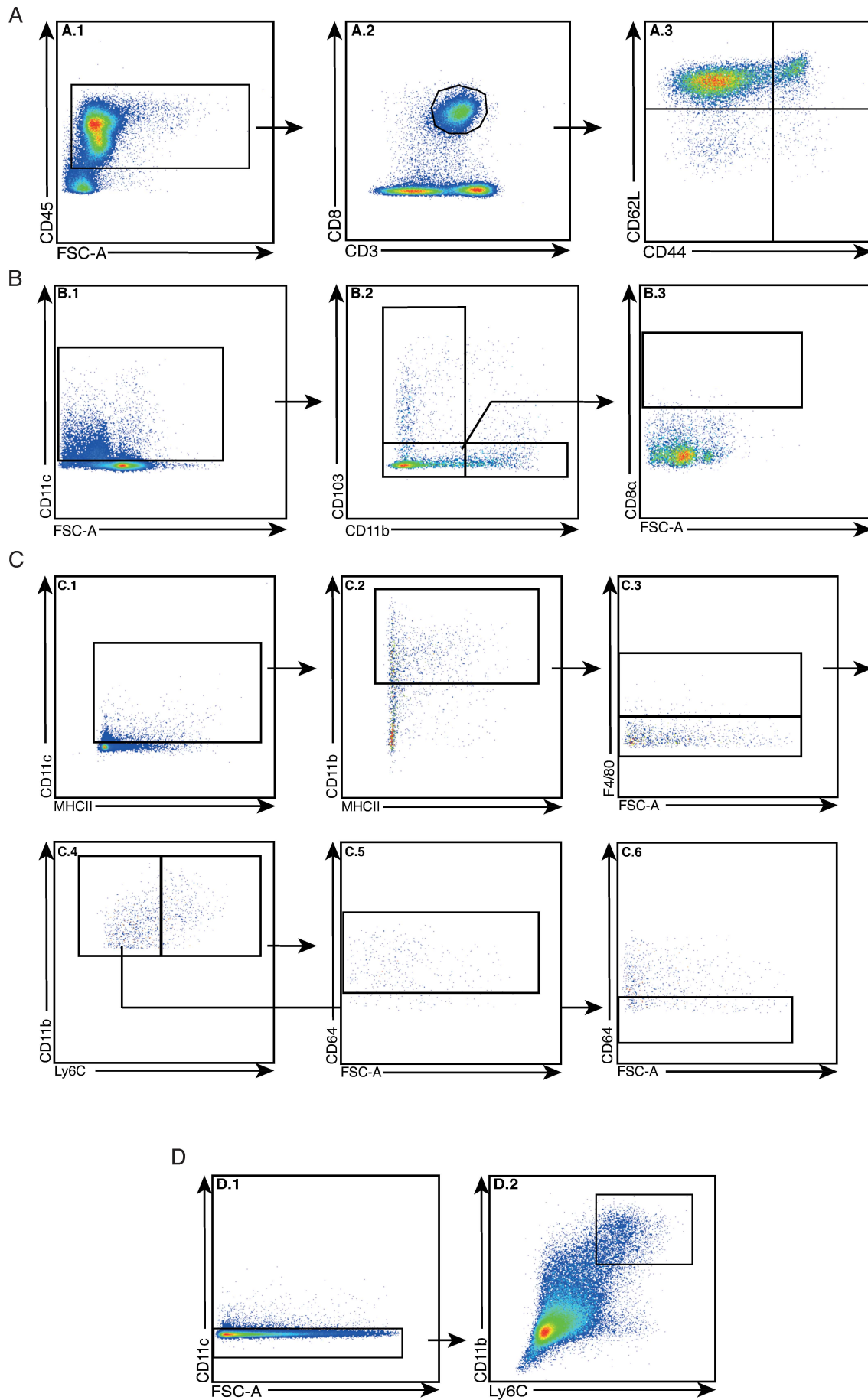|	Variable	
Sexe-no.(%)	Female	14 (24)
	Male	45 (76)
Age-yr (median, IQR)		66 (13)
WHO performance status-no.(%)	0	26 (44)
	1	31 (52)
	2	2 (1)
Histology-no.(%)	Nonsquamous-cell	34 (59)
	Squamous-cell	24 (41)
	NA	2
Stage-no.(%)	IIIB	8 (14)
	IV	51 (86)
Smoker-no.(%)	No	6 (10)
	Yes	53 (90)

Univariate and multivariate Cox models for overall survival

Features		Univariate			Multivariate		
		HR	95%CI	p-value	HR	95%CI	p-value
Age		0.98	0.94-1.02	p=0.420	0.98	0.93-1.03	p=0.344
Gender	Female	-			-		
	Male	1.16	0.53-2.56	p=0.711	0.87	0.36-2.12	p=0.765
WHO PS	0	-			-		
	≥1	1.00	0.52-1.93	p=0.999	1.19	0.56-2.52	p=0.658
Histology	Non squamous	-			-		
	Squamous	1.22	0.62-2.40	p=0.556	0.94	0.43-2.08	p=0.879
Smoker	Never	-			-		
	Ever	1.28	0.45-3.65	p=0.642	1.21	0.34-4.32	p=0.774
Stage	IIIB	-			-		
	IV	0.60	0.24-1.49	p=0.271	0.66	0.20-2.14	p=0.491
H.p status	Seronegative	-			-		
	Seropositive	3.35	1.69-6.66	p=0.001	3.71	1.77-7.77	p=0.001

H.p : Helicobacter pylori; WHO PS: World Health Organisation (WHO) performance status

Univariate and multivariate Cox models for progression free survival

Features		Univariate			Multivariate		
		HR	95%CI	p-value	HR	95%CI	p-value
Age		0.95	0.92-0.98	p=0.005	0.94	0.90-0.98	p=0.003
Gender	Female	-			-		
	Male	0.58	0.30-1.11	p=0.102	0.74	0.34-1.60	p=0.440
WHO PS	0	-			-		
	≥1	0.85	0.48-1.53	p=0.595	0.88	0.46-1.70	p=0.713
Histology	Non squamous	-			-		
	Squamous	1.36	0.76-2.43	p=0.304	1.76	0.87-3.54	p=0.115
Smoker	Never	-			-		
	Ever	0.62	0.26-1.47	p=0.277	0.50	0.17-1.45	p=0.203
Stage	IIIB	-			-		
	IV	1.41	0.60-3.33	p=0.432	1.07	0.40-2.84	p=0.899
H.p status	Seronegative	-			-		
	Seropositive	1.39	0.75-2.59	p=0.292	1.51	0.80-2.84	p=0.201

H.p : Helicobacter pylori; WHO PS: World Health Organisation (WHO) performance status

Supplementary table 2. Summary of clinical characteristics of the Montreal cohort

Features		N = 29
Age-yrs	Median (IQR)	65 (46-79)
Sex		
	Female	16 (55%)
	Male	13 (45%)
Smoking habits		
	Never	1 (3%)
	Formet or current	28 (97%)
Obesity (kg/m²)	Median (IQR)	25.7 (15.5-37.5)
ECOG		
	0	14 (48%)
	1-2	15 (52%)
Histology		
	Adenocarcinoma	21 (72%)
	Squamous-cell	7 (25%)
	NSCLC	1 (3%)
Stage		
	3A	3 (10%)
	3B	4 (14%)
	4	22 (76%)
PD-L1 expression		
	<1%	7 (24%)
	1-49%	7 (24%)
	>50%	13 (45%)
	Unknown	2 (7%)
Prior chemotherapy		
	No	15 (52%)
	Yes	14 (48%)
ICB		
	Atezolizumab	2 (7%)
	Durvalumab	2 (7%)
	Durvalumab/Tremelimumab	5 (17%)
	Nivolumab	4 (14%)
	Nivolumab/Pembrolizumab	1 (3%)
	Pembrolizumab	13 (46%)
	Pembrolizumab/Chemotherapy	1 (3%)
	Pembrolizunab/Tremelimumab	1 (3%)
Progression-free survival	Median [95%CI]	4.4 [2.7-10.8]

Univariate and multivariate Cox models for overall survival

	Features	Univariate			Multivariate		
		HR	95%CI	p-value	HR	95%CI	p-value
Age		0.97	0.91-1.03	0.25	0.95	0.88-1.02	0.16
Sex	Female		-			-	
	Male	0.83	0.29-2.33	0.72	0.31	0.06-1.75	0.18
ECOG	0		-			-	
	≥1	0.90	0.32-2.50	0.84	0.60	0.16-2.29	0.45
Histology	ADK		-			-	
	EPI	1.27	0.40-4.02	0.68	2.97	0.43-20.7	0.27
Stage	IIIA-IIIB		-			-	
	IV	2.37	0.53-10.52	0.26	2.04	0.43-9.68	0.37
H.p status	Seronegative		-			-	
	Seropositive	1.73	0.58-5.19	0.14	2.30	0.55-9.59	0.25

Univariate and multivariate Cox models for progression free survival

	Features	Univariate			Multivariate		
		HR	95%CI	p-value	HR	95%CI	p-value
Age		1.00	0.95-1.05	0.99	0.96	0.90-1.04	0.31
Sex	Female		-			-	
	Male	1.10	0.49-2.45	0.82	0.37	0.11-1.23	0.10
ECOG	0		-			-	
	≥1	0.68	0.31-1.53	0.35	0.57	0.15-2.16	0.40
Histology	ADK		-			-	
	EPI	1.71	0.68-4.32	0.26	3.23	0.79-13.2	0.10
Stage	IIIA-IIIB		-			-	
	IV	1.81	0.71-4.59	0.21	2.60	0.86-7.86	0.09
H.p status	Seronegative		-			-	
	Seropositive	2.39	1.01-5.65	0.048	3.53	1.05-11.8	0.04