

Fig. 1A

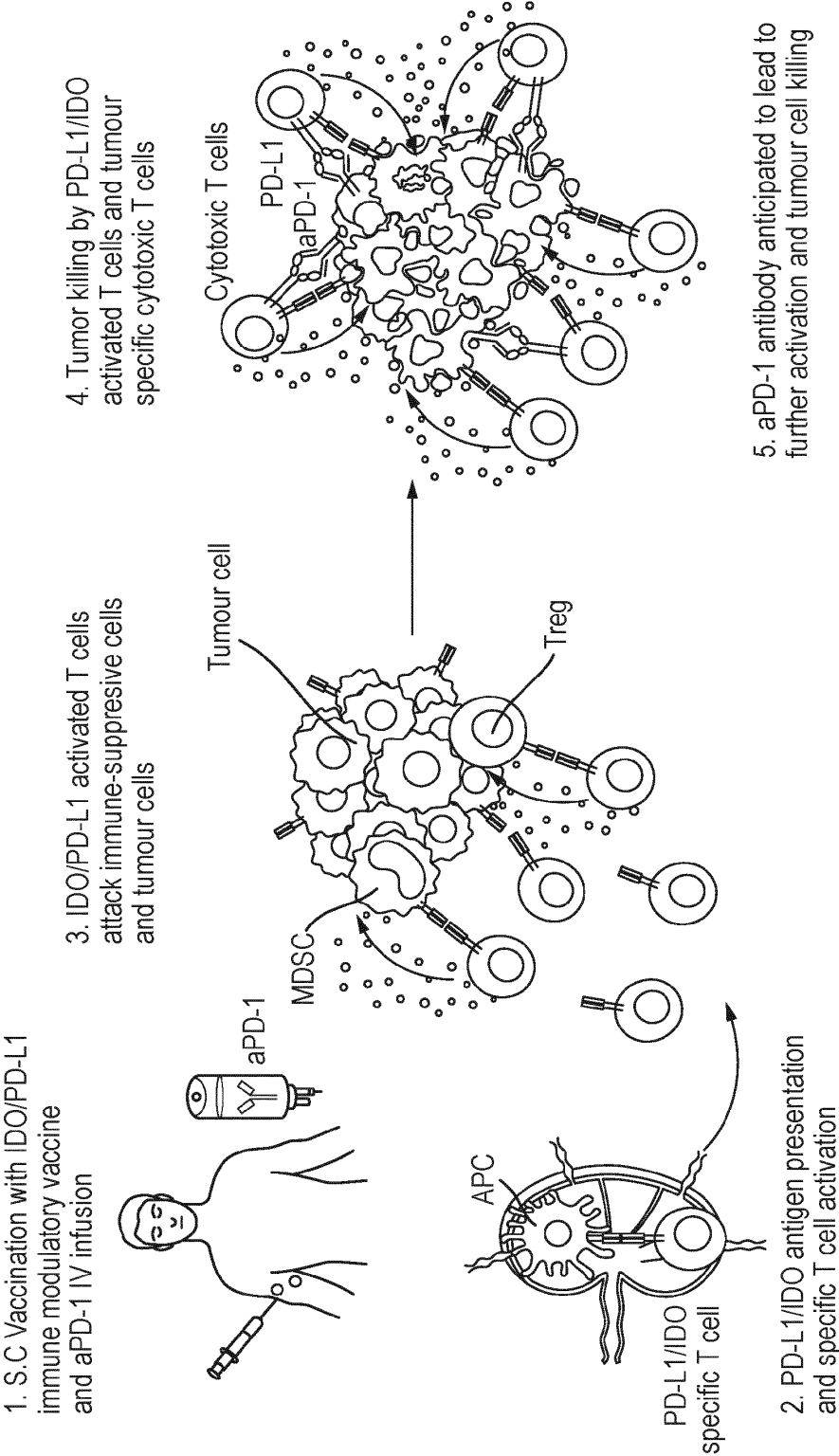
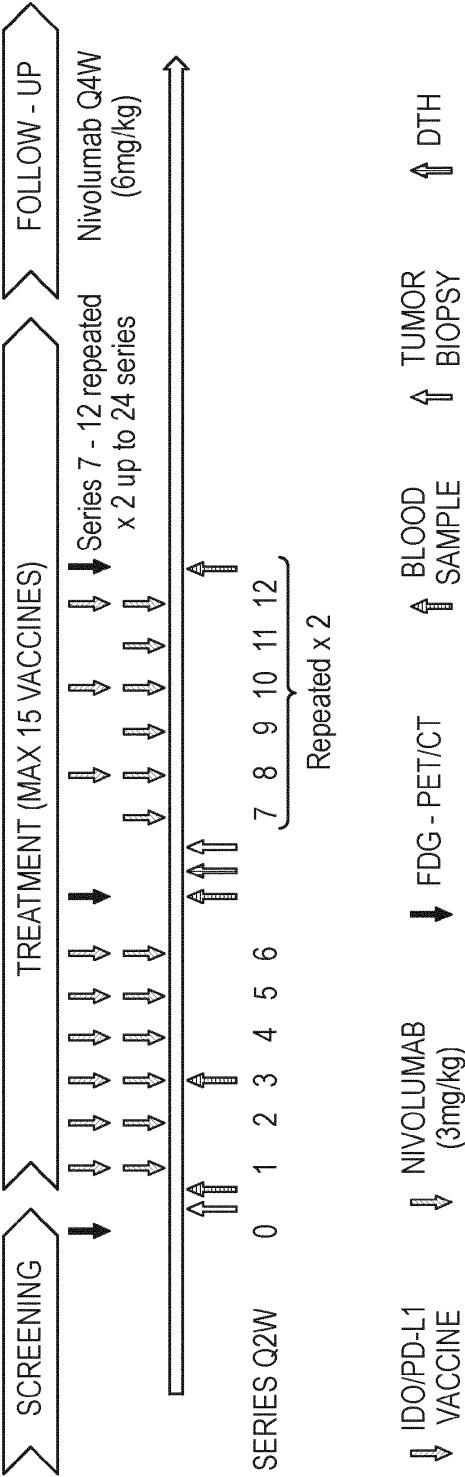


Fig. 1B



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Fig. 2A

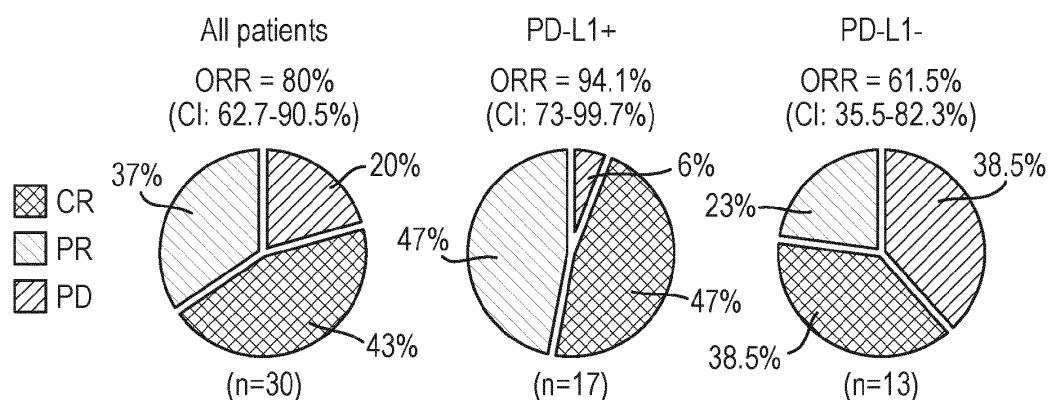


Fig. 2B

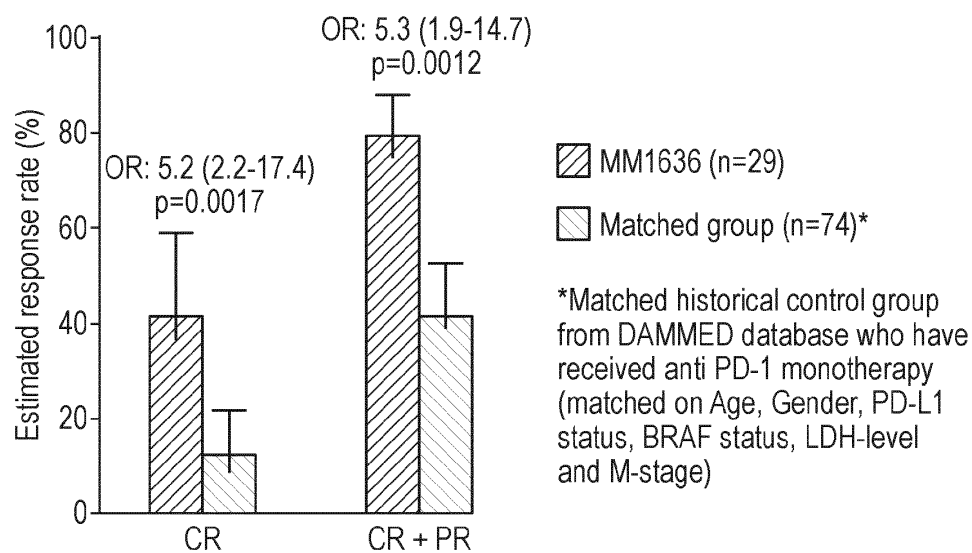


Fig. 2C

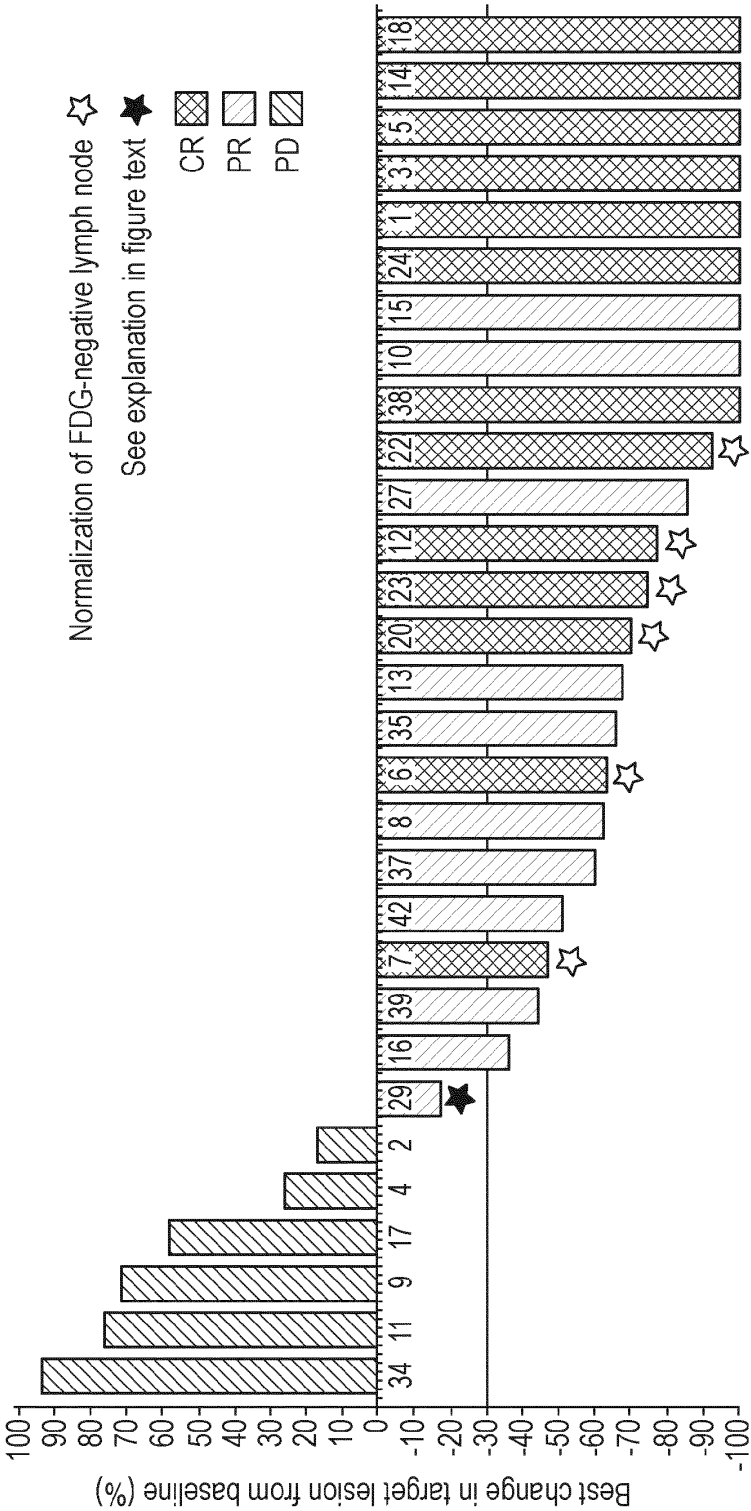


Fig. 2D

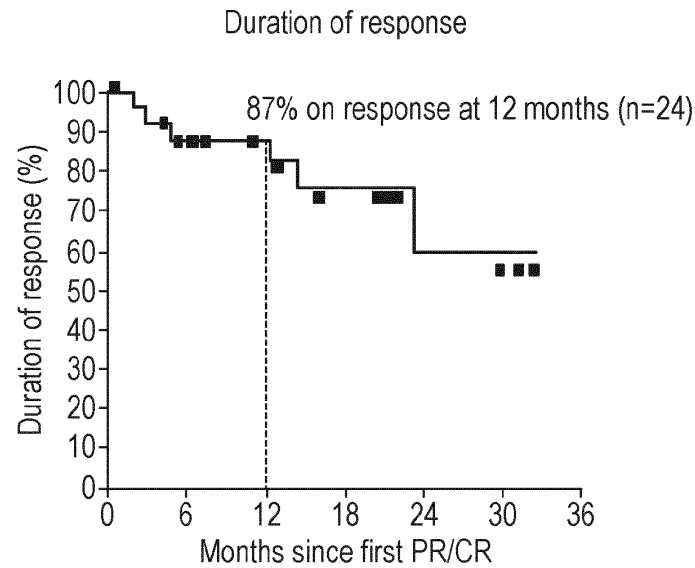
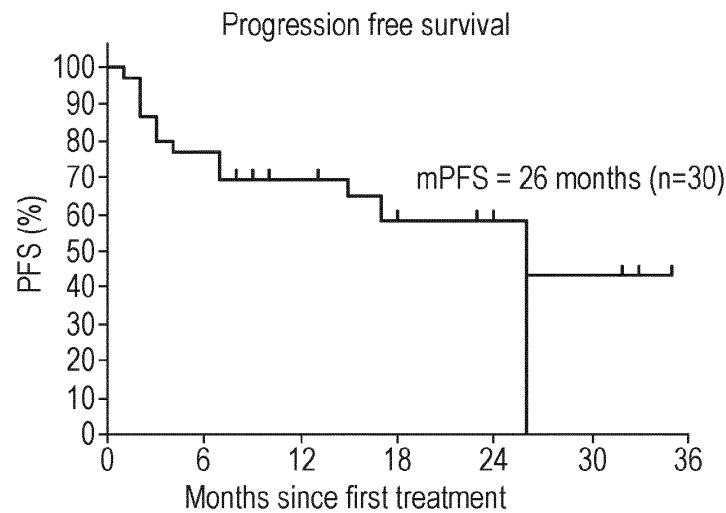


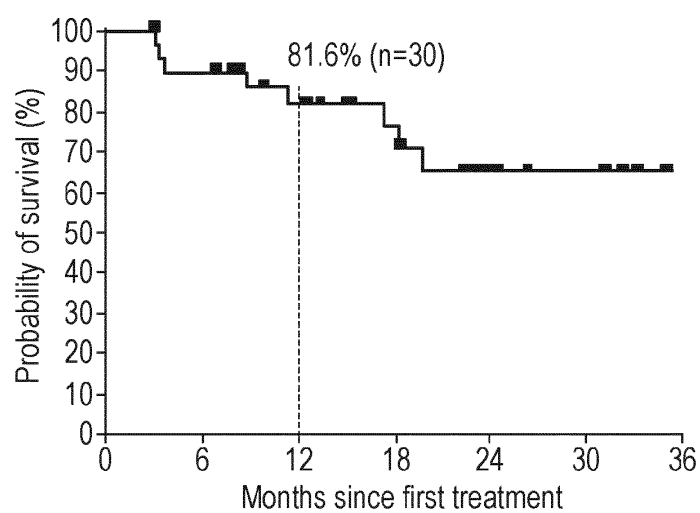
Fig. 2E



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Fig. 2F

Overall survival



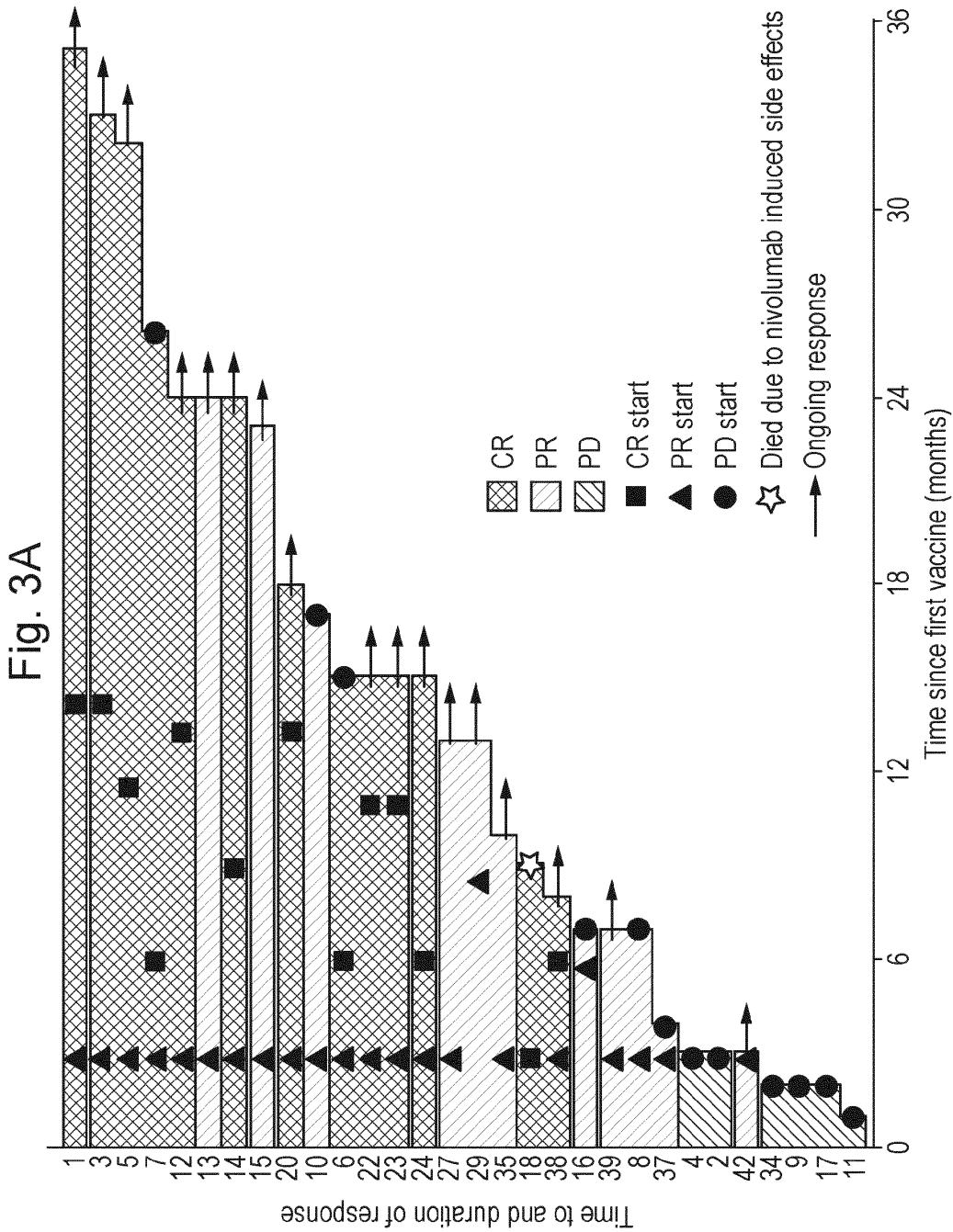


Fig. 3B

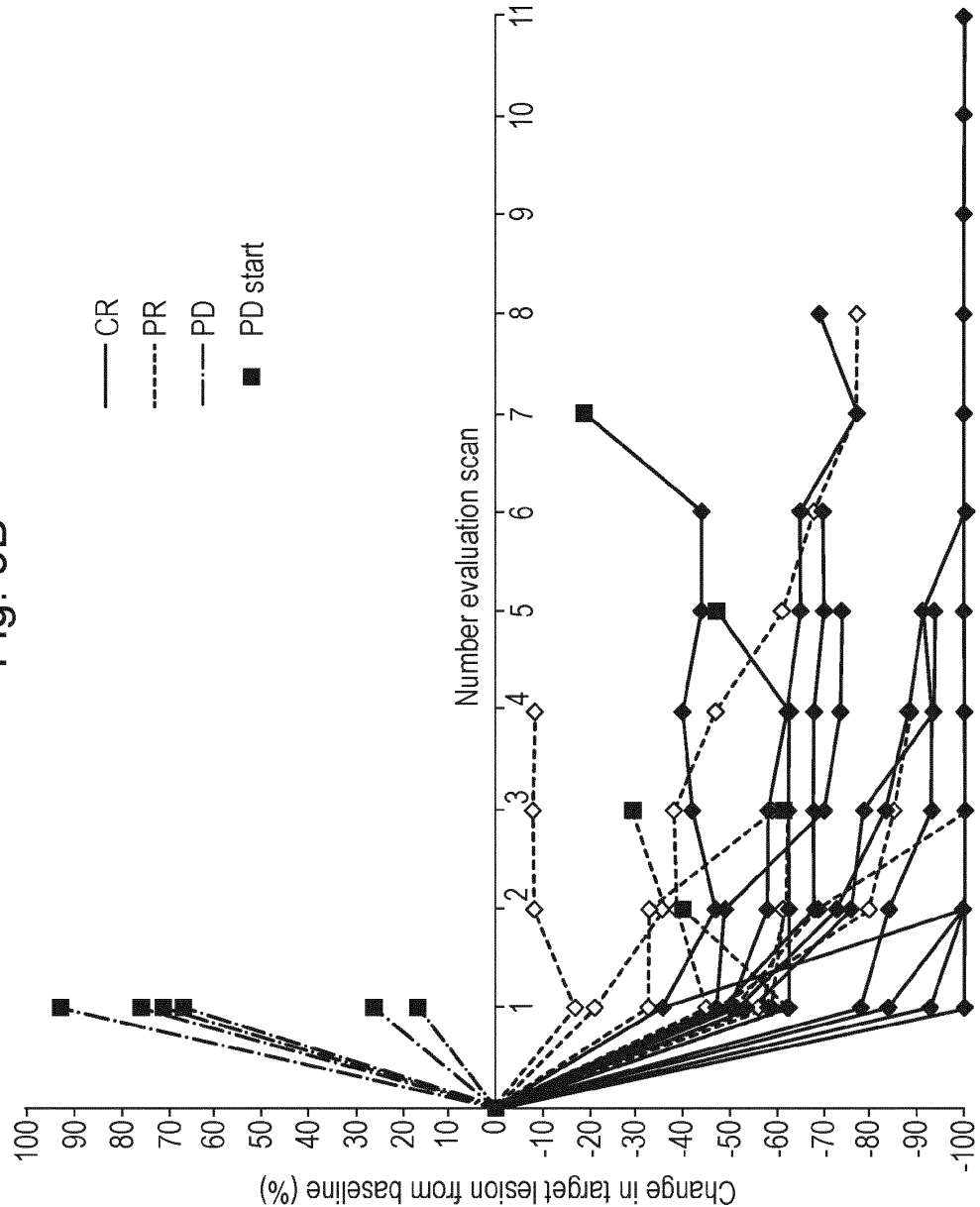


Fig. 3C

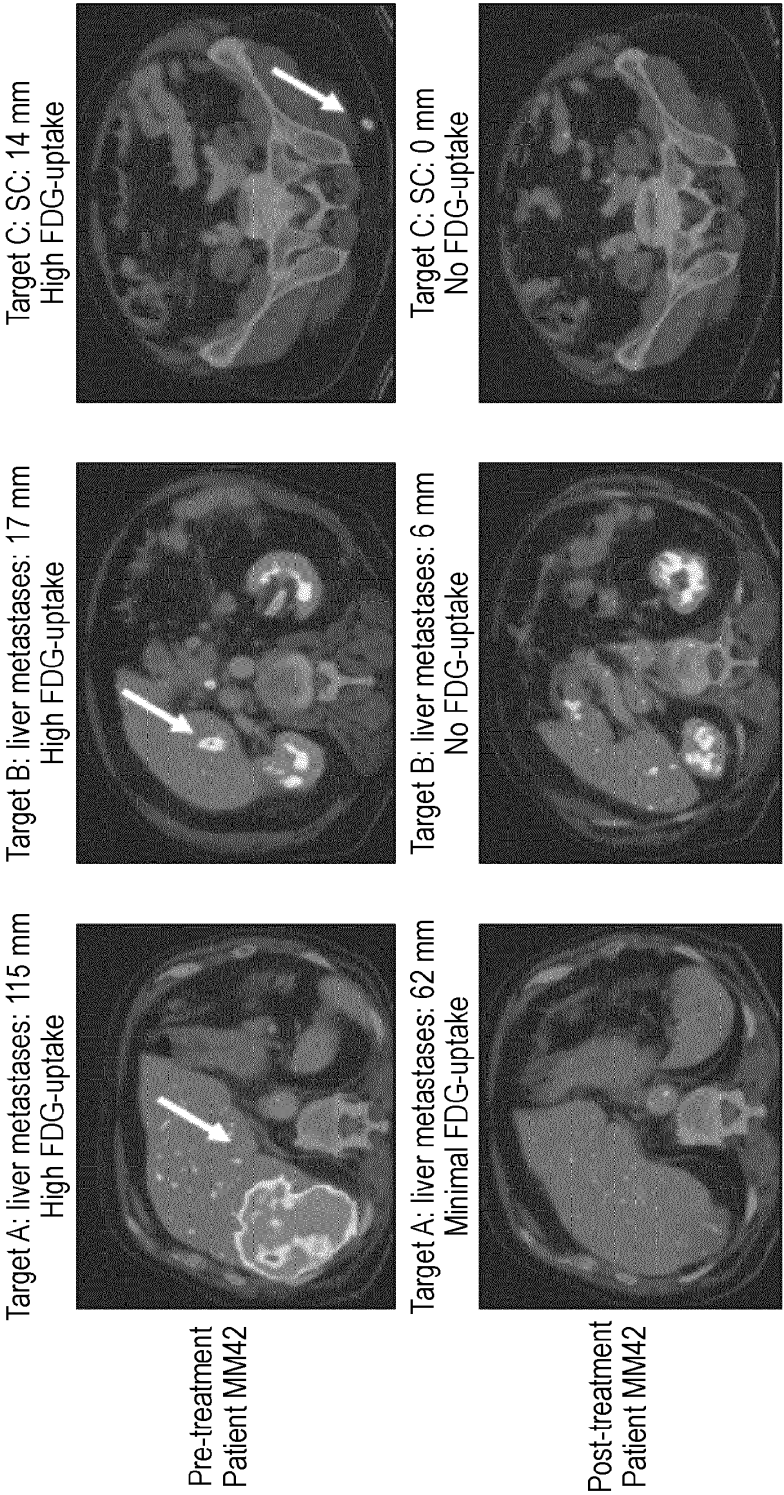


Fig. 4A

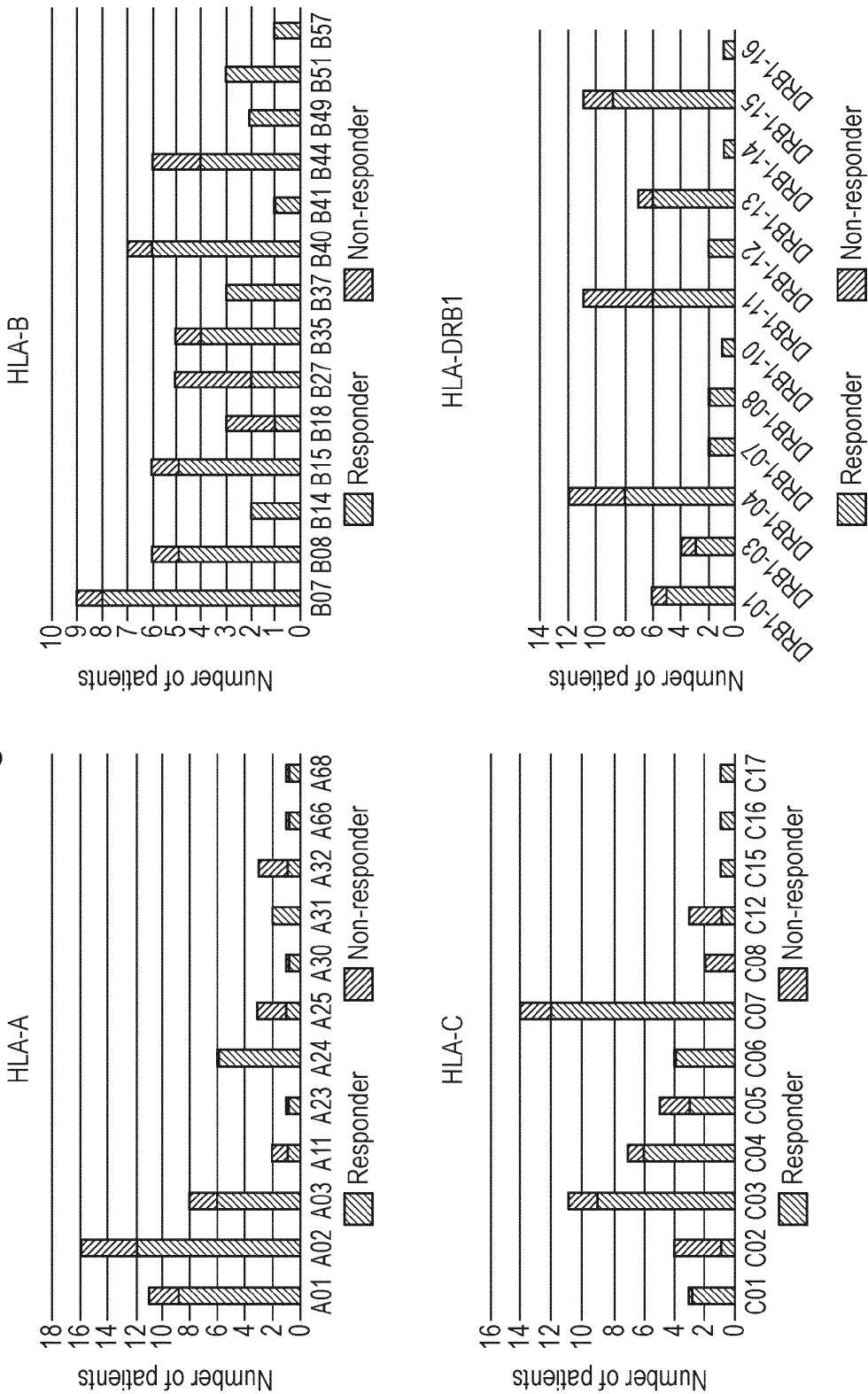


Fig. 4B

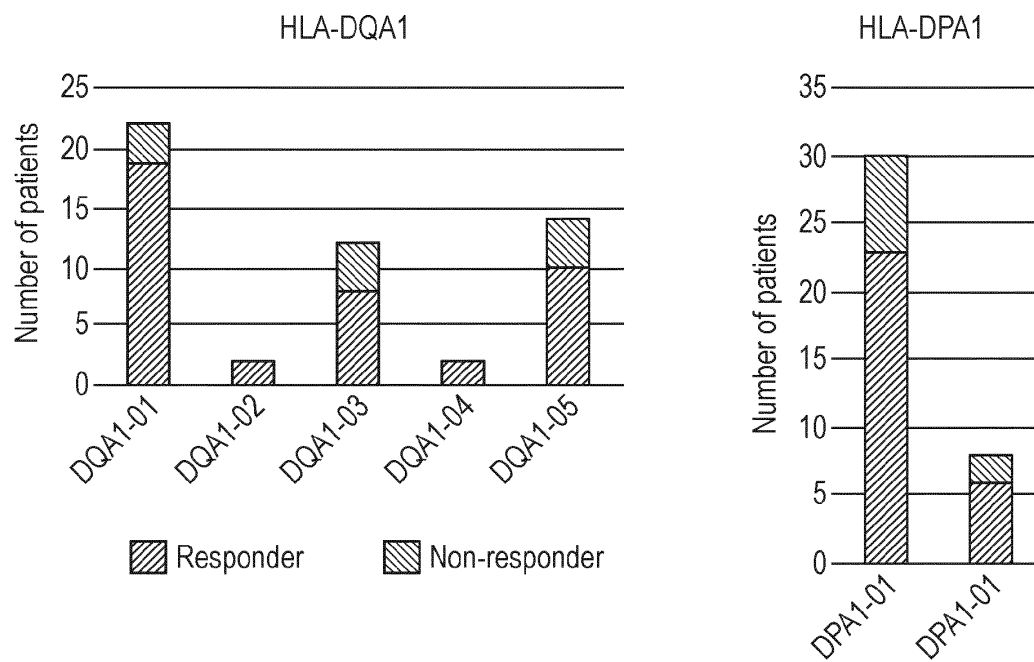


Fig. 5A

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		Complete responders							Partial responders							Progressive disease																	
Patient ID		1	3	5	6	7	12	14	18	20	22	23	24	38	8	10	13	15	16	27	29	35	37	39	42	2	4	9	11	17	34	All patients	
Significant response at baseline	IDO	ns	ns	*	ns	ns	ns	ns	*	ns	*	ns	*	ns	DR	ns	*	ns	ns	ns	*	ns	*	ns	*	ns	ns	ns	*	ns	10 (33%)		
	PD-L1	ns	ns	ns	ns	ns	ns	*	ns	ns	*	*	ns	ns	ns	ns	*	ns	*	ns	ns	ns	ns	ns	*	ns	DR	ns	*	ns	8 (27%)		
Significant response on vaccination	IDO	ns	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	DR	DR	*	*	*	*	*	DR	*	*	*	*	ns	28 (93,3%)
	PD-L1	DR	*	*	*	*	ns	DR	*	*	*	*	*	*	*	*	*	*	*	DR	DR	*	*	*	*	*	ns	*	*	DR	ns	26 (86,7%)	

*

 P<0.05 - Statistically significant response based on DFR analysis

DR

 "Double response" - the number of spots in peptide wells are 2 x higher than control, cannot be statistically confirmed due to replicate number

ns no significant response

Fig. 5B

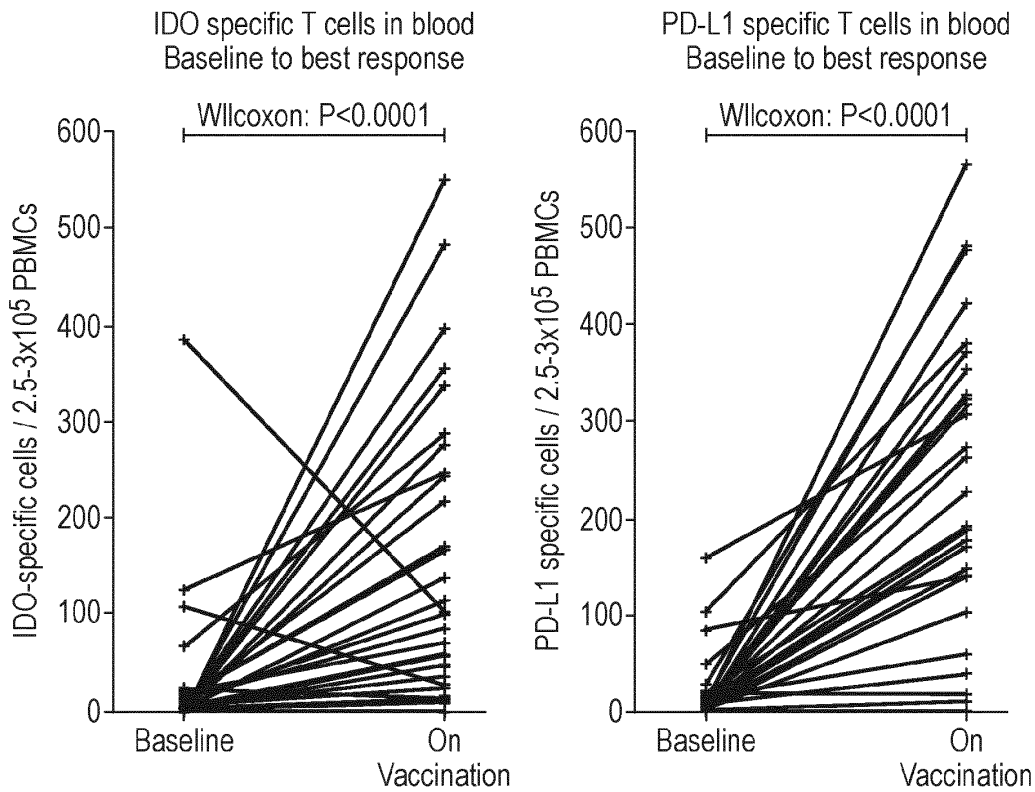


Fig. 5C

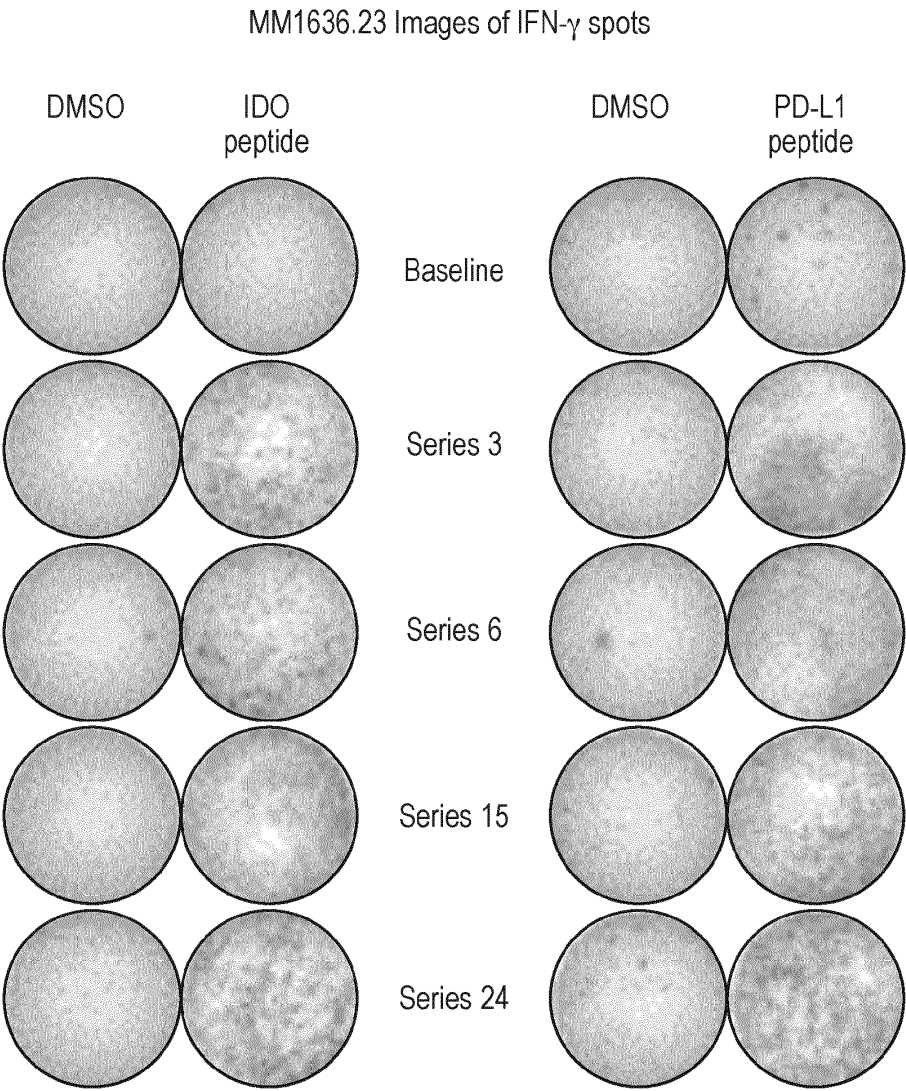
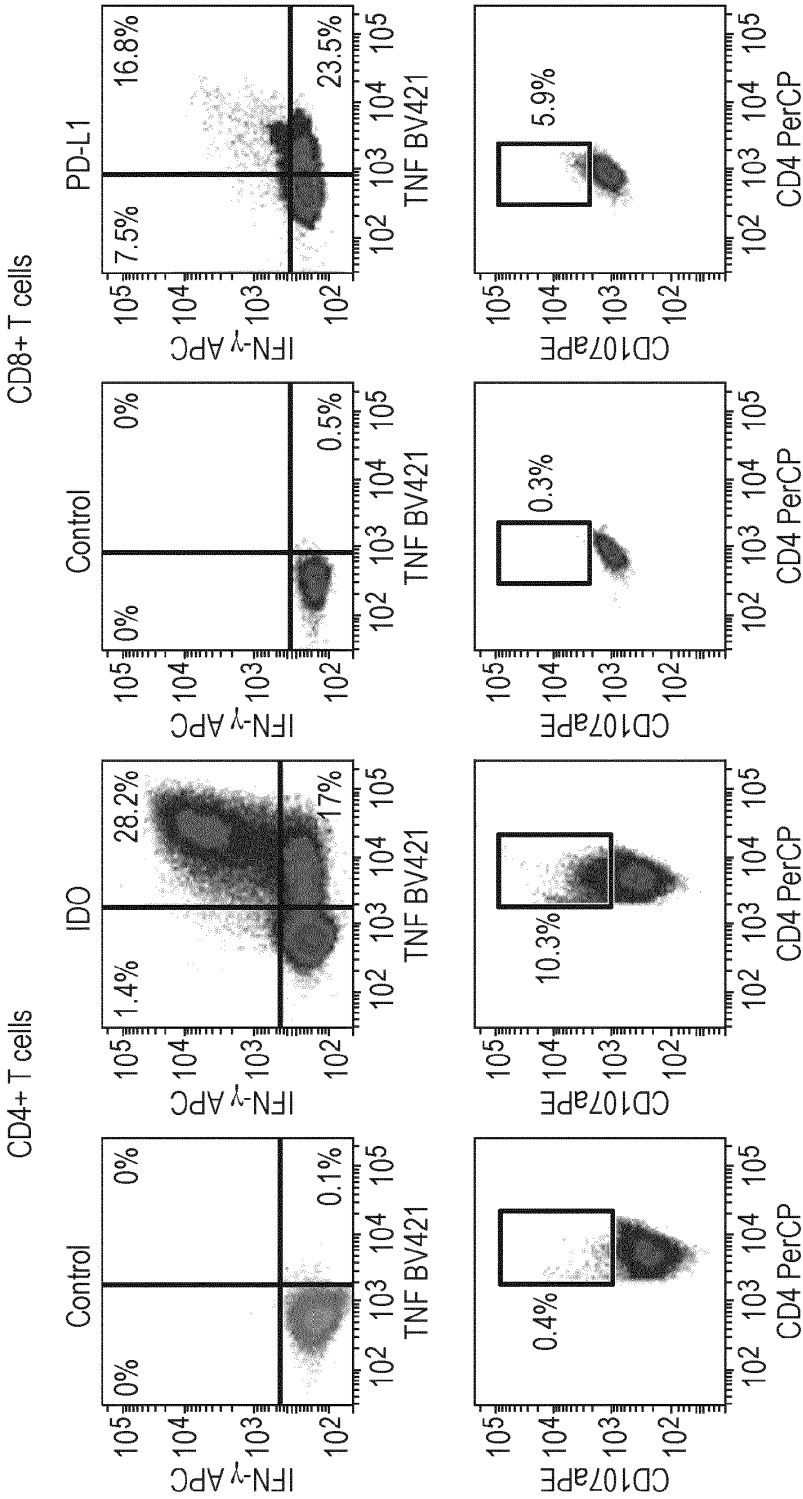


Fig. 5D



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Fig. 6

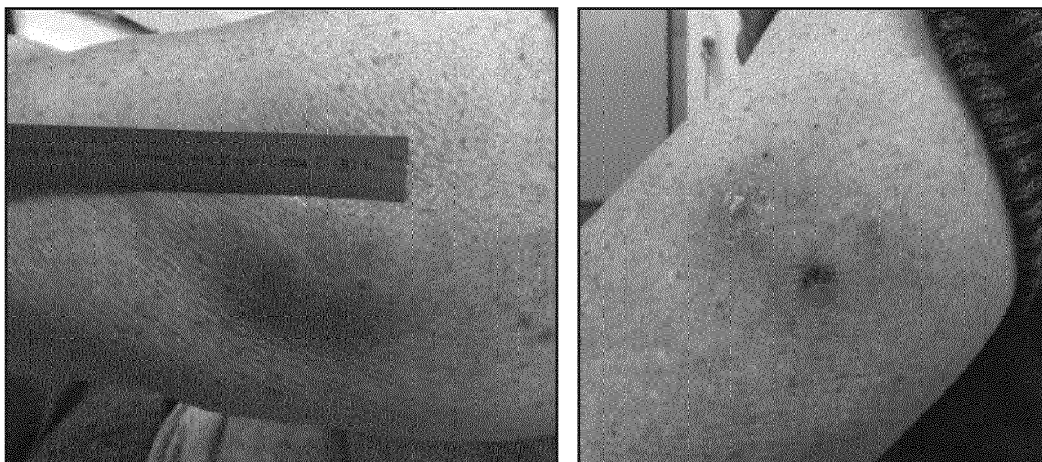


Fig. 7A

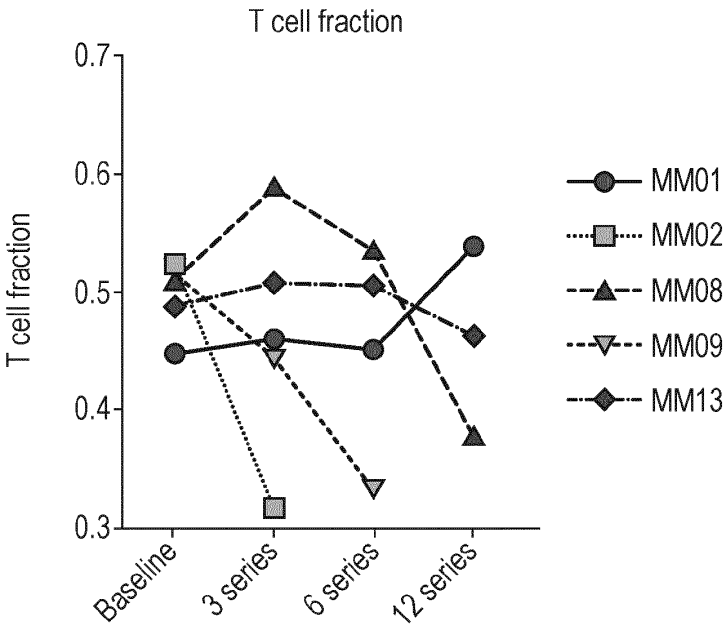
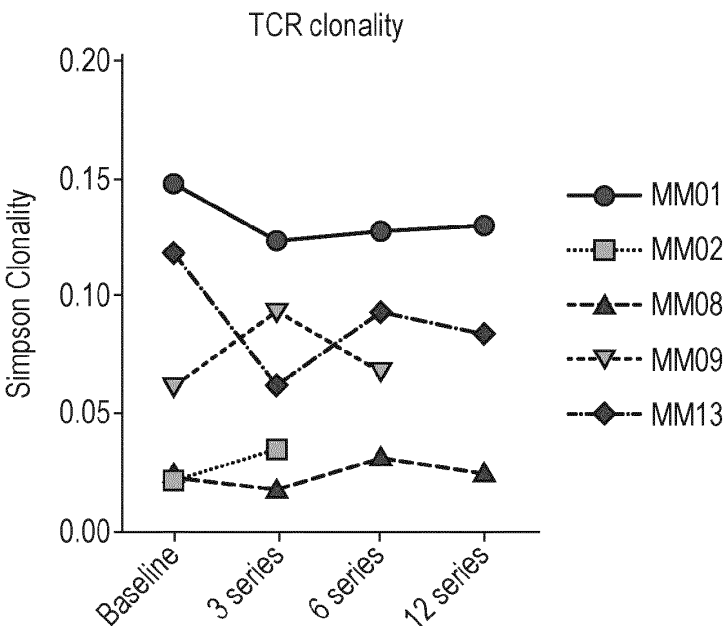


Fig. 7B



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Fig. 7C

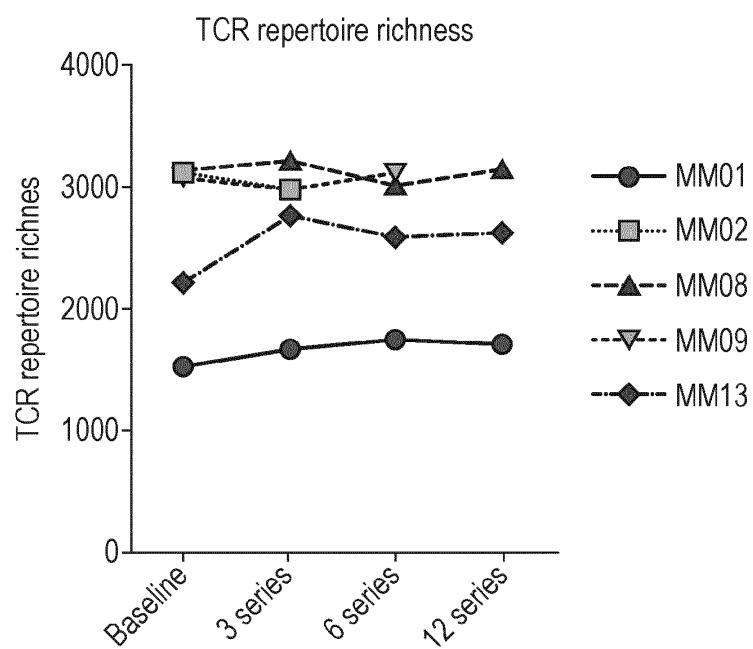
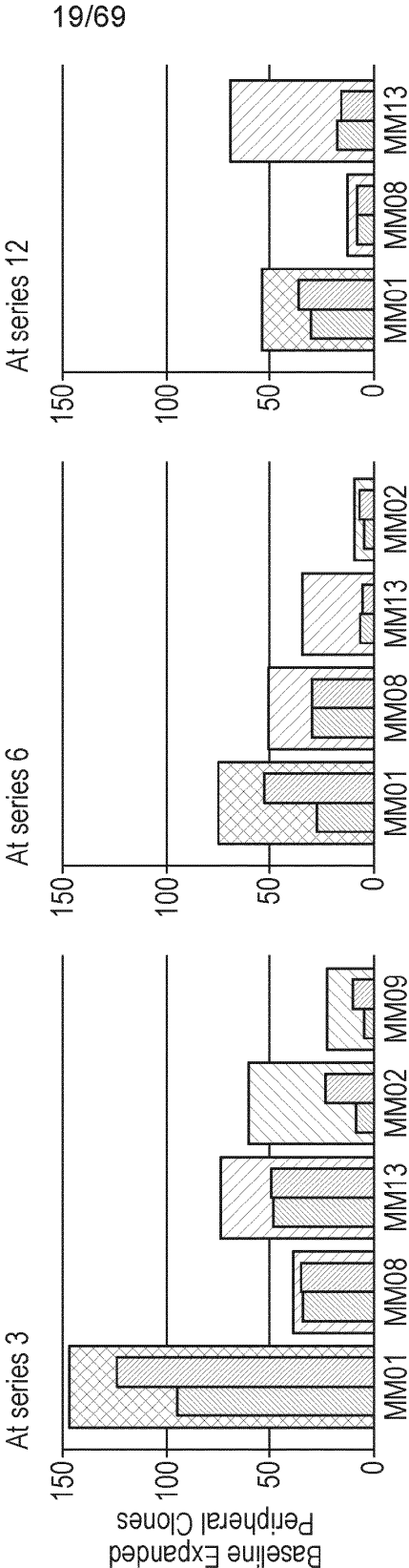


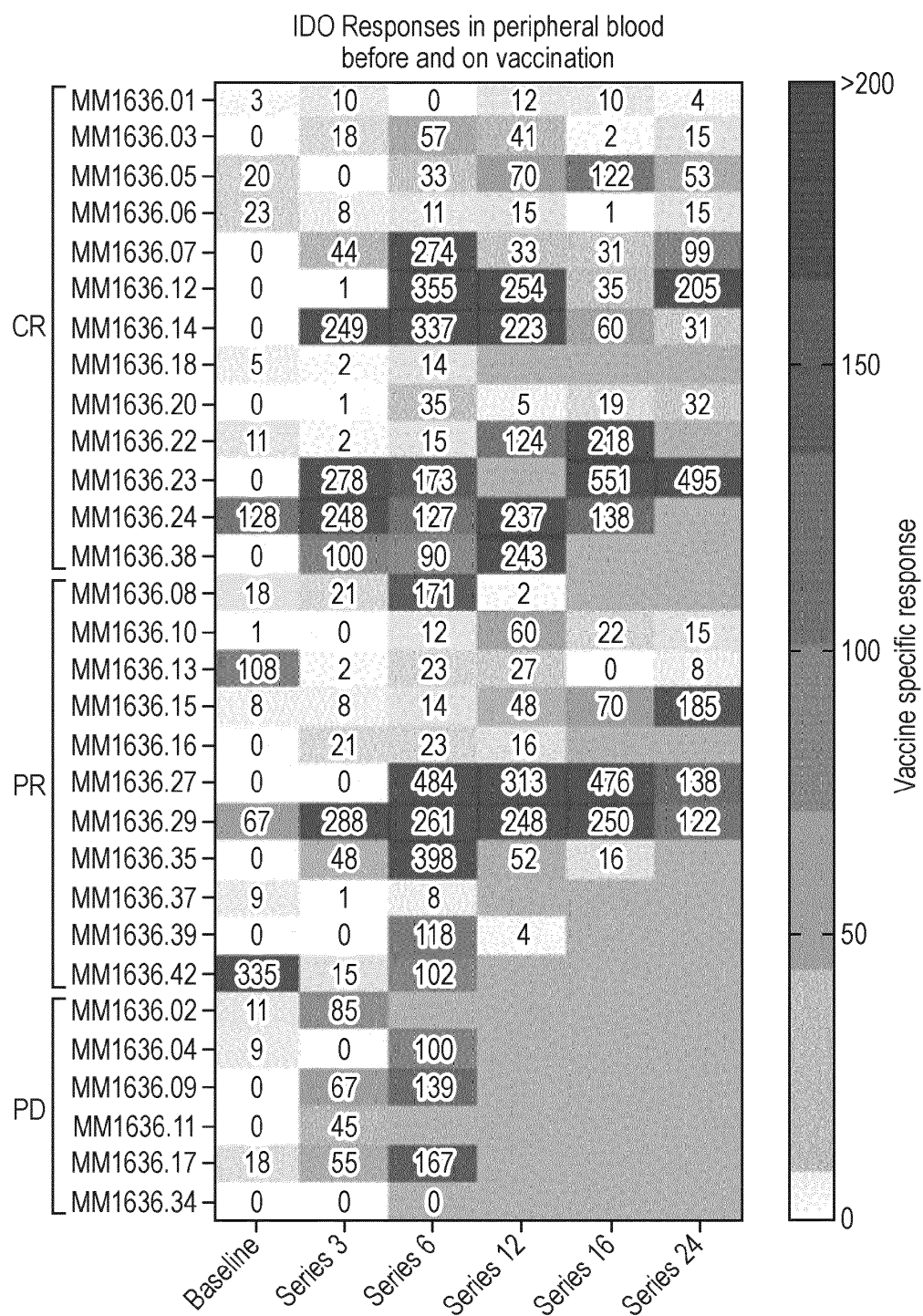
Fig. 7D

CR PR PD
Proportion of expanded clones
in blood also detected in biopsy Baseline After 6 series



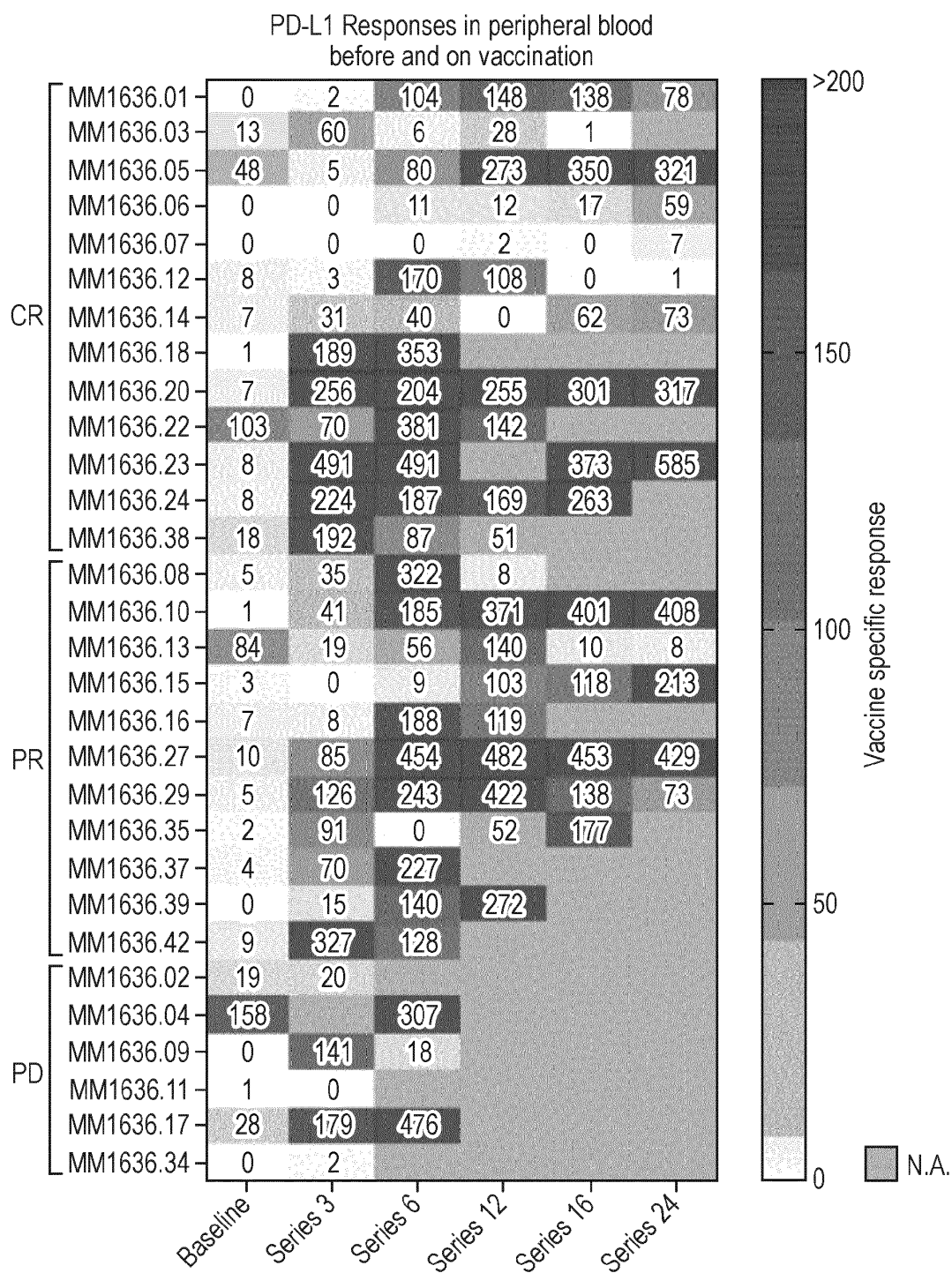
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Fig. 8A



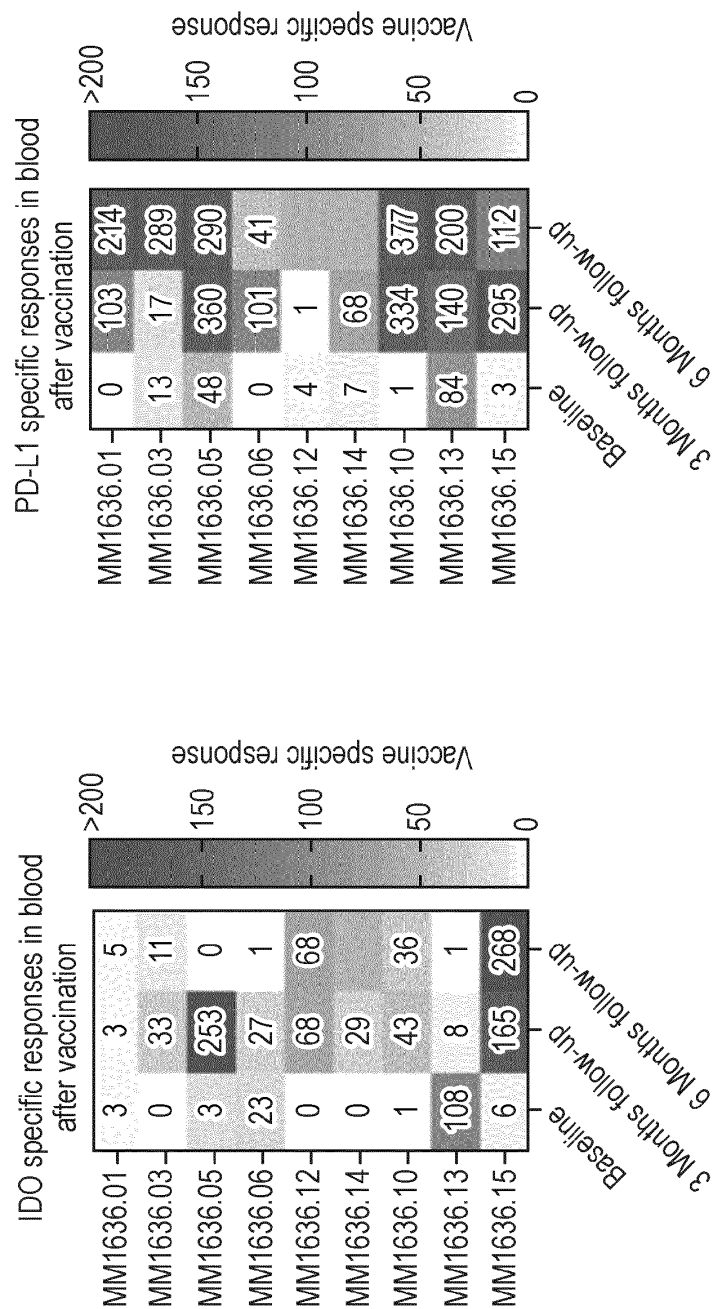
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Fig. 8A (Cont.)



RECTIFIED SHEET (RULE 91) ISA/EP

Fig. 8B



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Fig. 8C

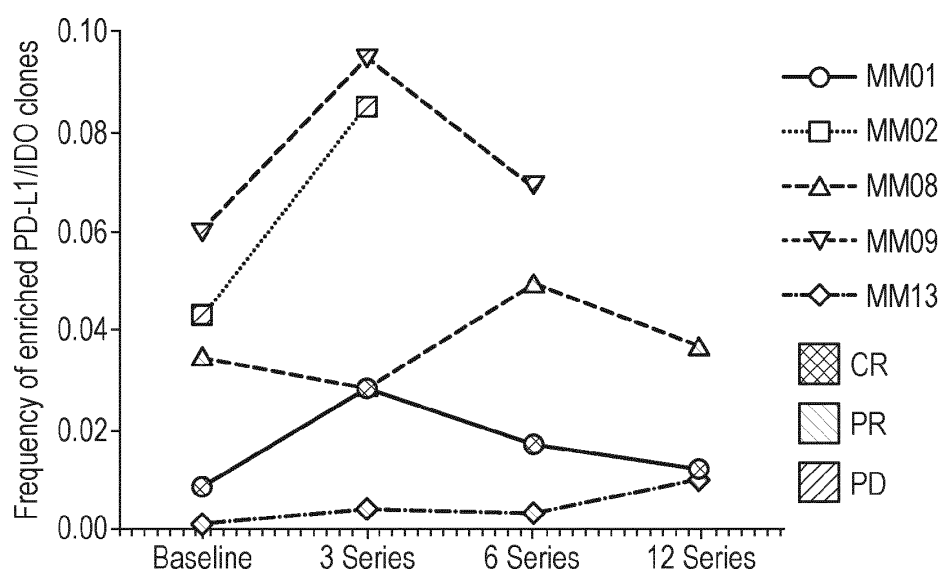


Fig. 9A

Number of CD3 and CD8 T cells
pre and post treatment at tumor site

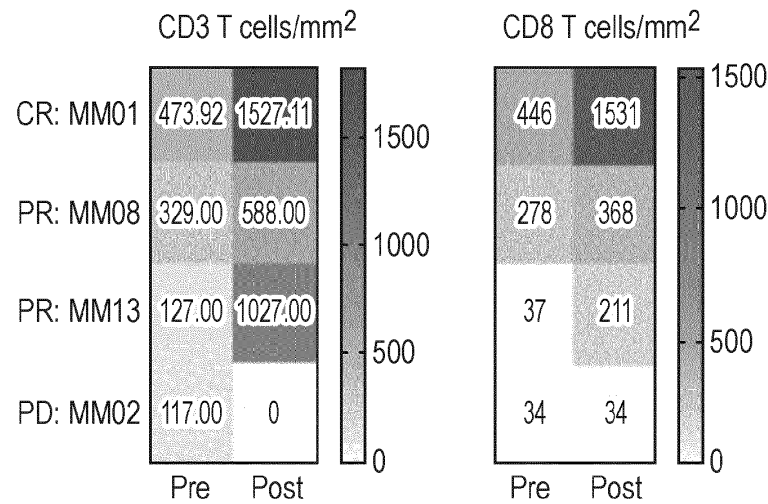


Fig. 9B

T cell fraction
pre and post treatment at tumor site

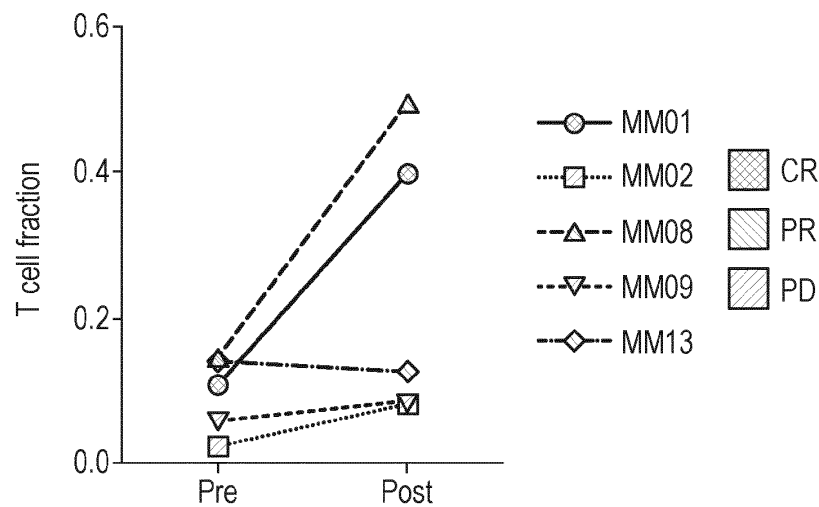


Fig. 9C

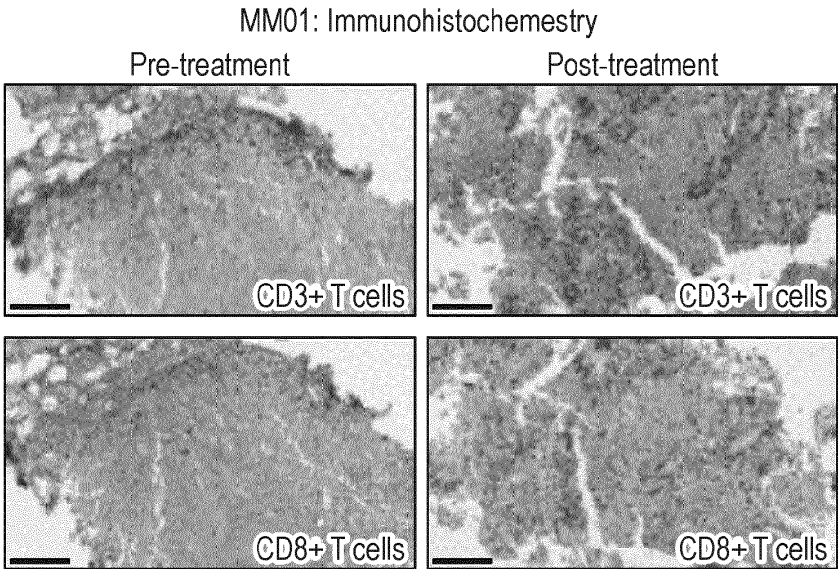


Fig. 9D

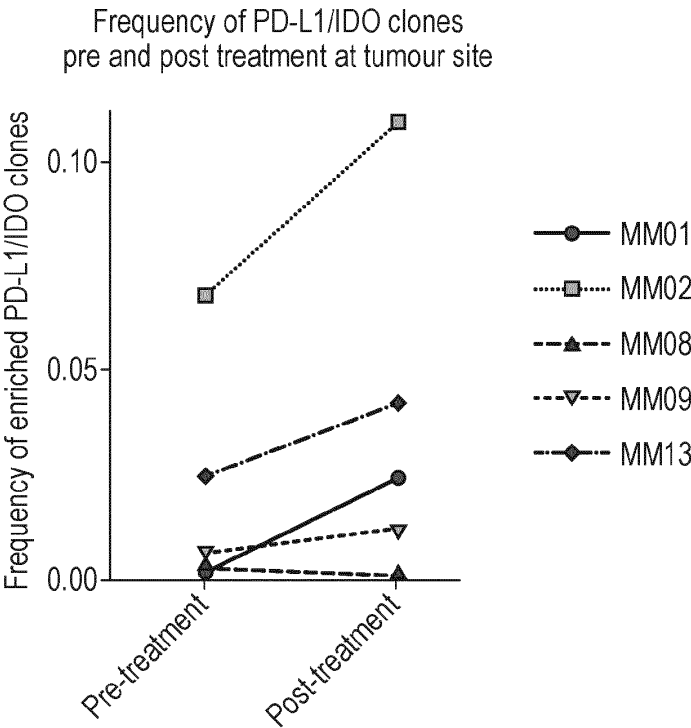


Fig. 9E

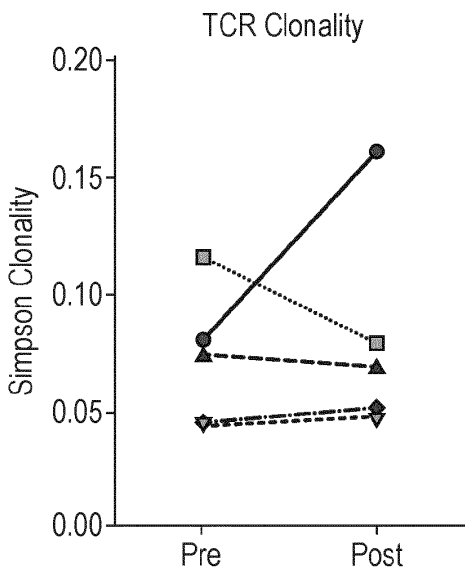
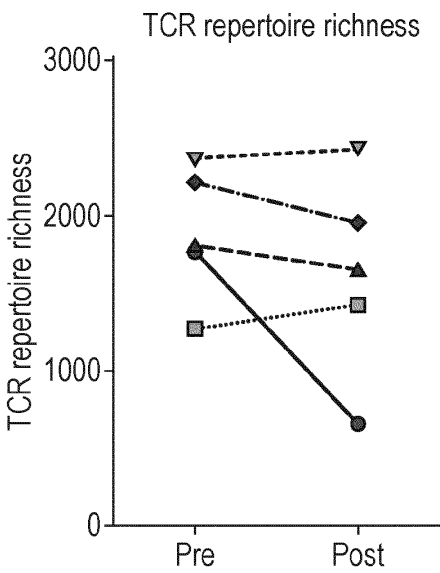
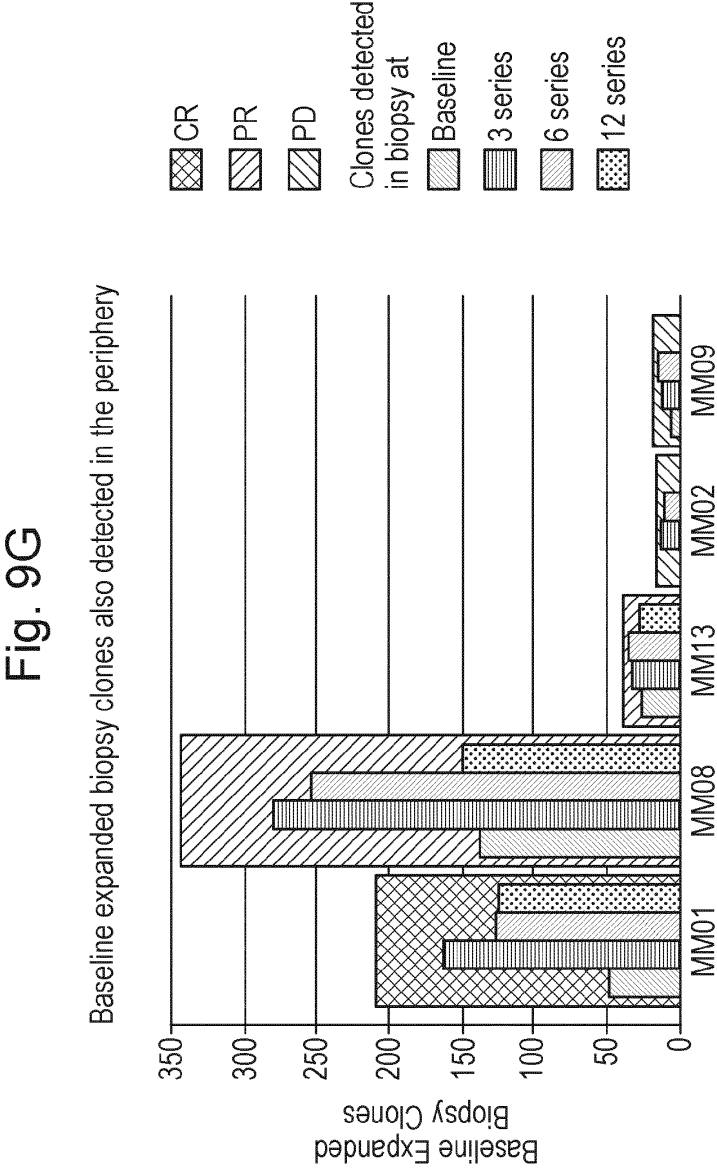


Fig. 9F





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Fig. 10A

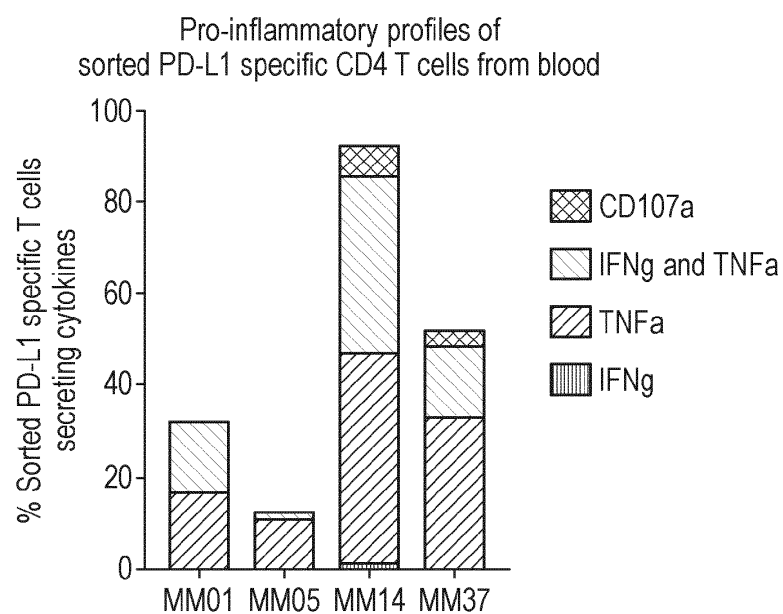


Fig. 10B

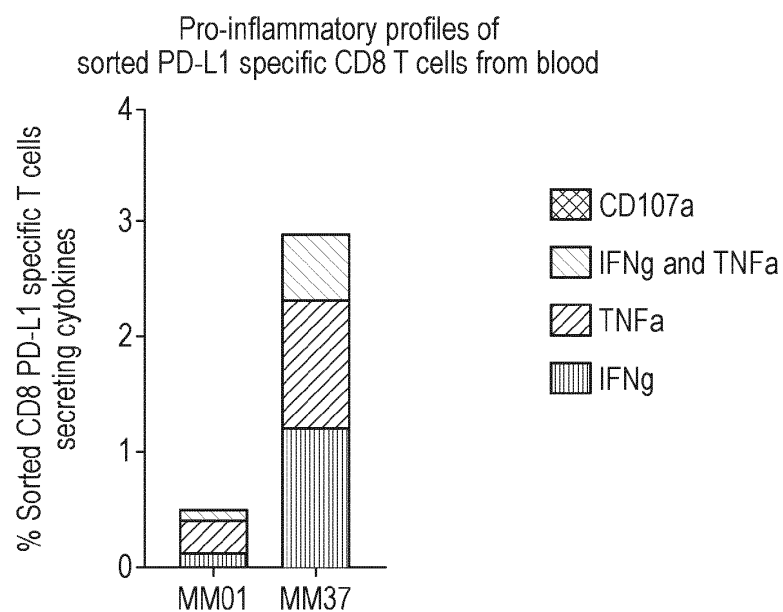


Fig. 10C

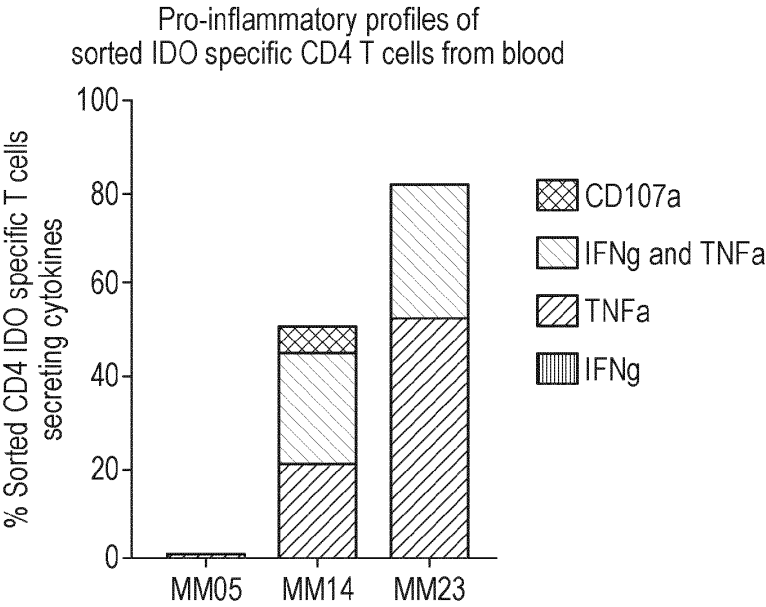


Fig. 10D

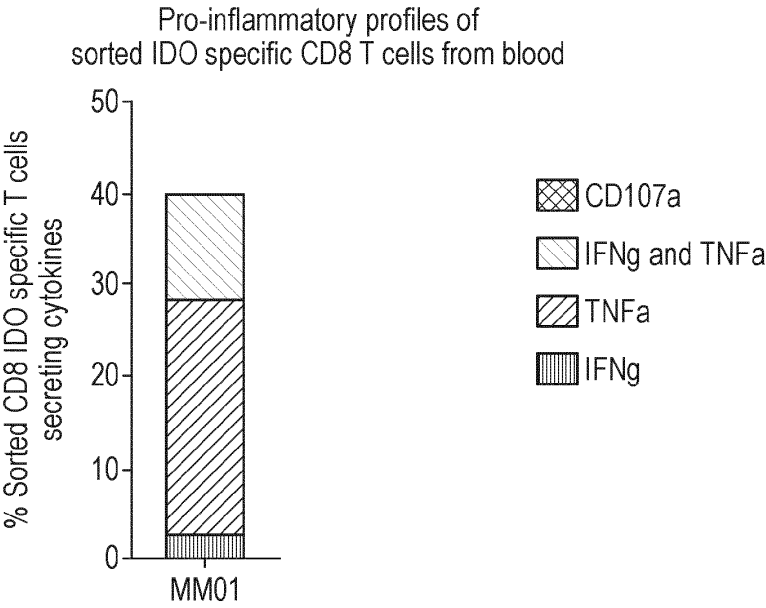
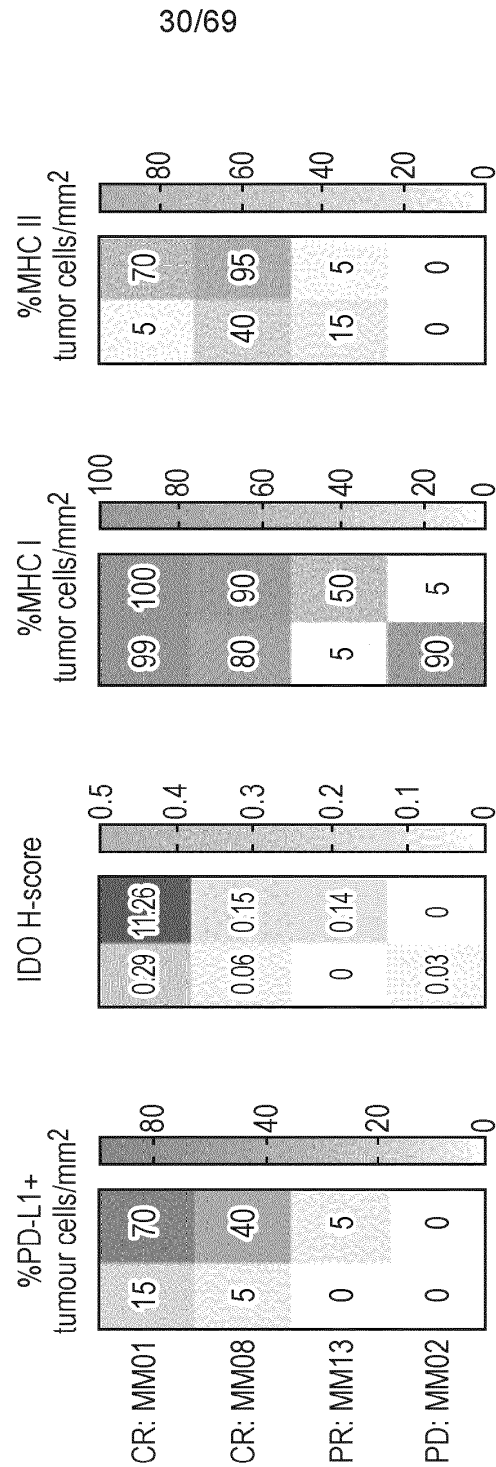


Fig. 11A



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Fig. 11B

CD8 T cells and their distance to
PD-L1+expressing cells in baseline biopsies

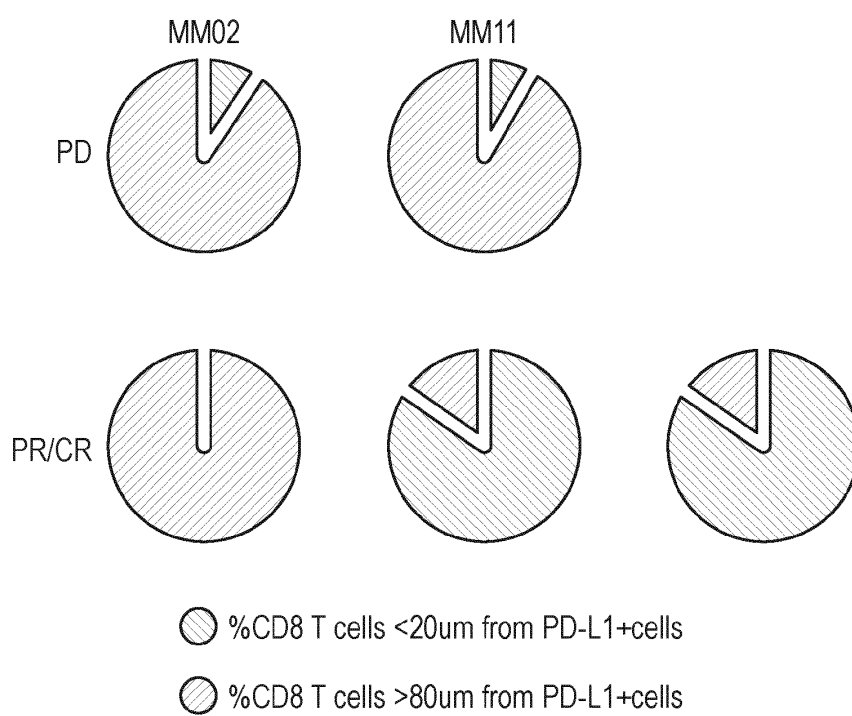


Fig. 12A

Vaccine specific response detected in the skin

Patient ID	1	3	4	6	10	14	15	16	20	22	23	24	27
IDO response	NA	*	NS	*	NS	NS	*	DR	NS	*	NA	NA	*
PD-L1 response	ICS	NS	DR	*	*	*	*	NS	*	*	NA	*	NA

* P<0.05 - statistically significant response based on DFR analysis

DR "Double response" - the number of spots in peptide wells are 2x higher than control, cannot be statistically confirmed due to replicate number

ns no significant response

ICS Response detected with intracellular cytokine staining

Response detected at injection site:

mix

PD-L1

IDO

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Fig. 12B

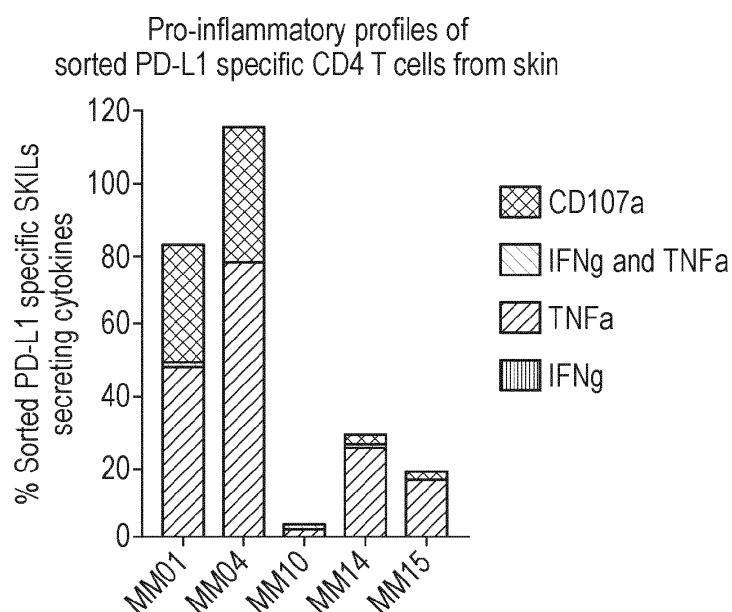


Fig. 12C

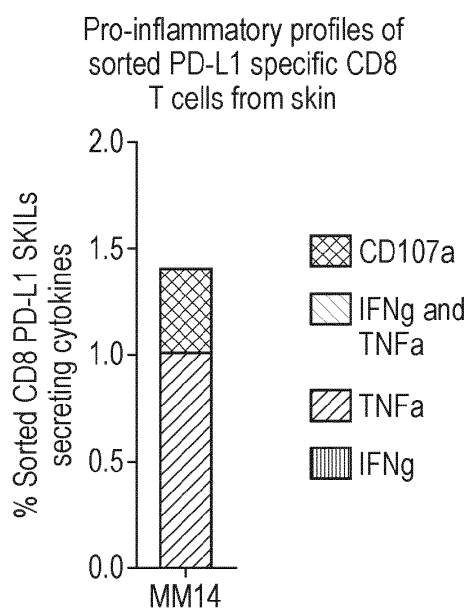


Fig. 12D

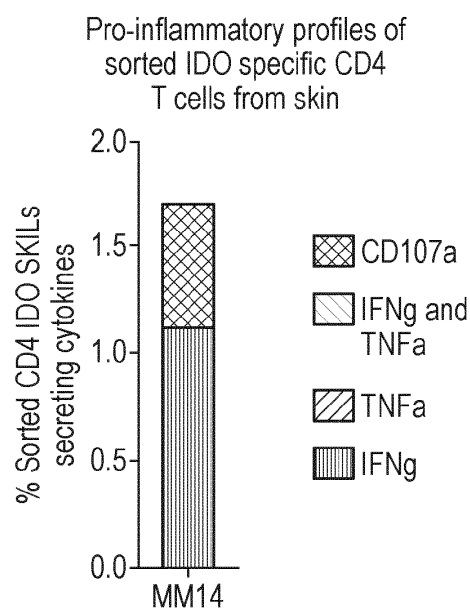


Fig. 13A

Top Most Frequent PD-L1 Clones
in SKILS from patient MM01

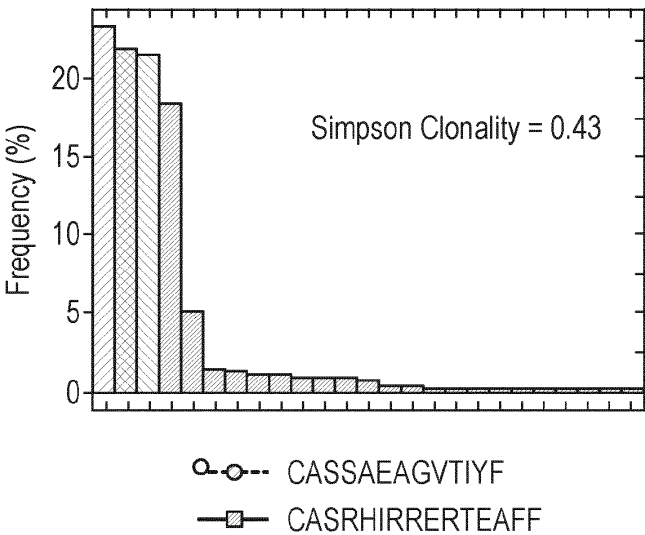


Fig. 13B

Two of top five PD-L1 SKIL clones detected in biopsy

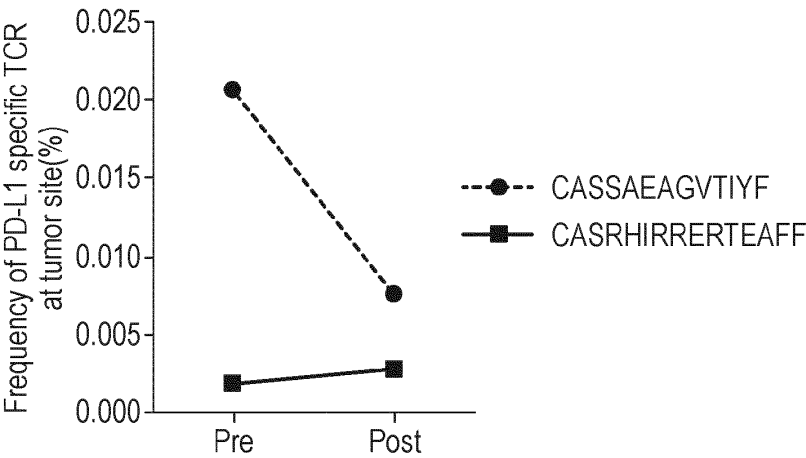


Fig. 14A

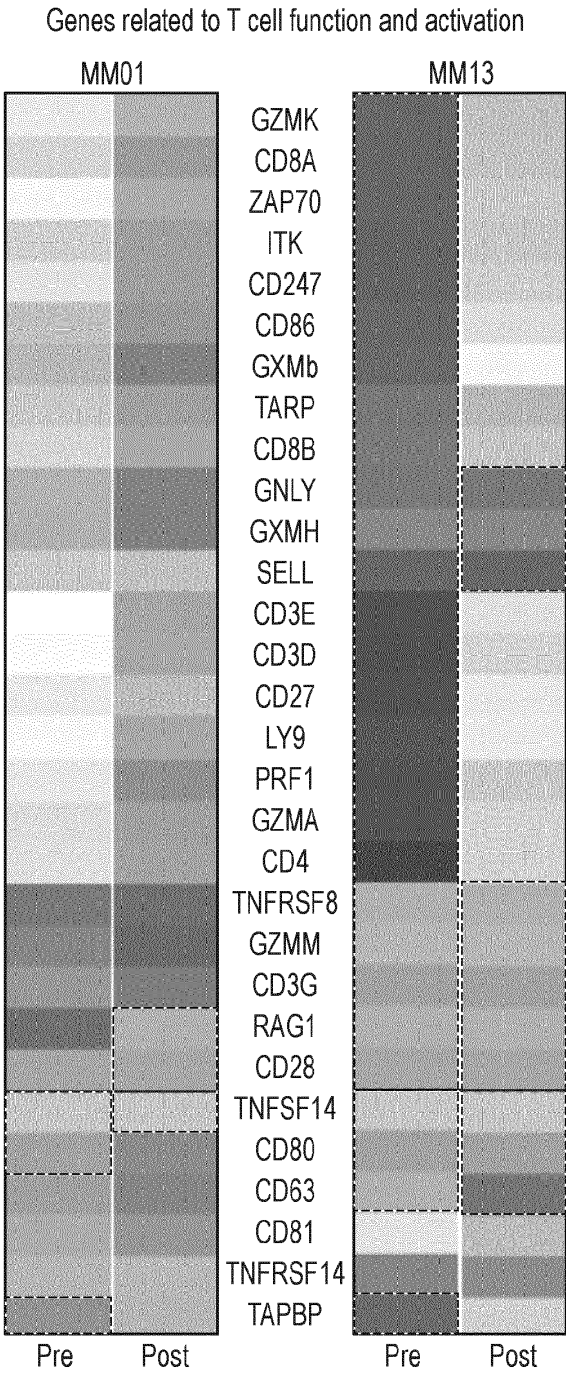


Fig. 14B

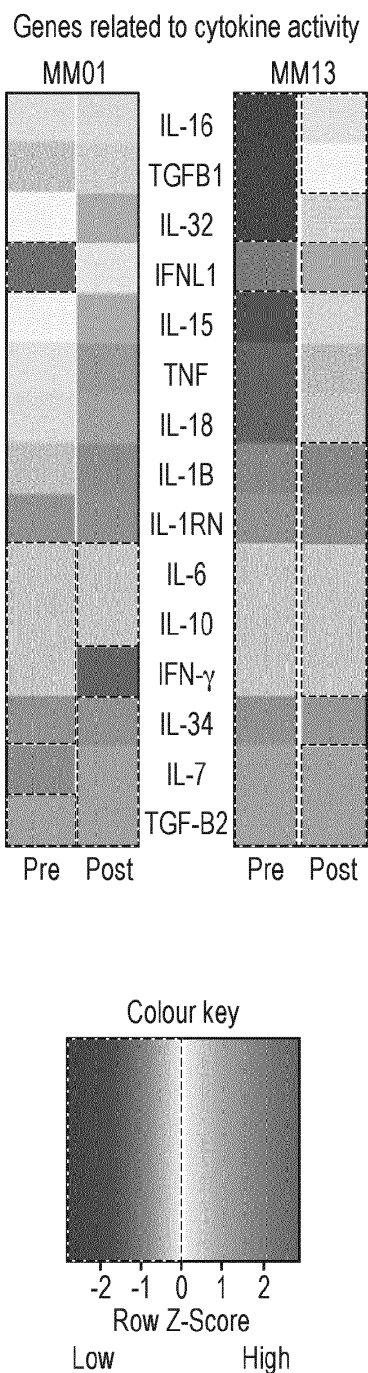


Fig. 14C

Genes related to immune checkpoint molecules

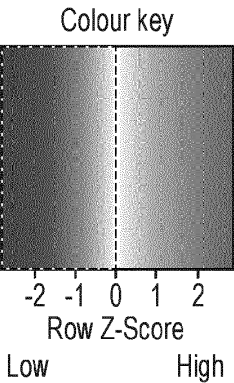
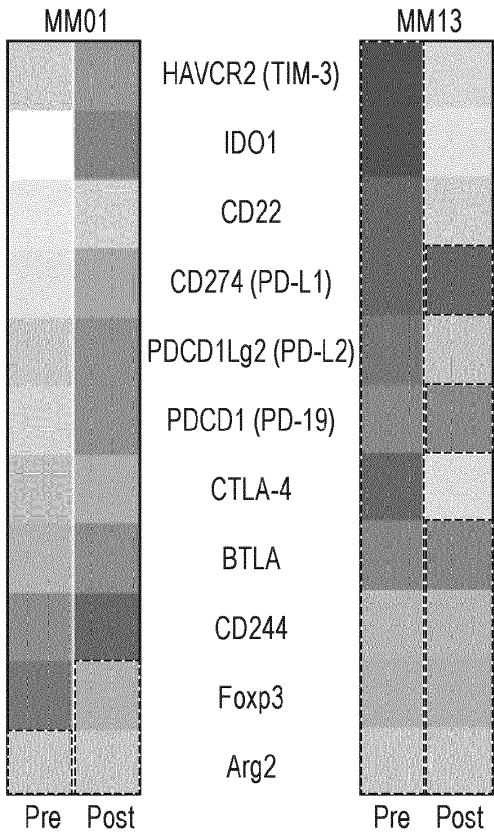


Fig. 15

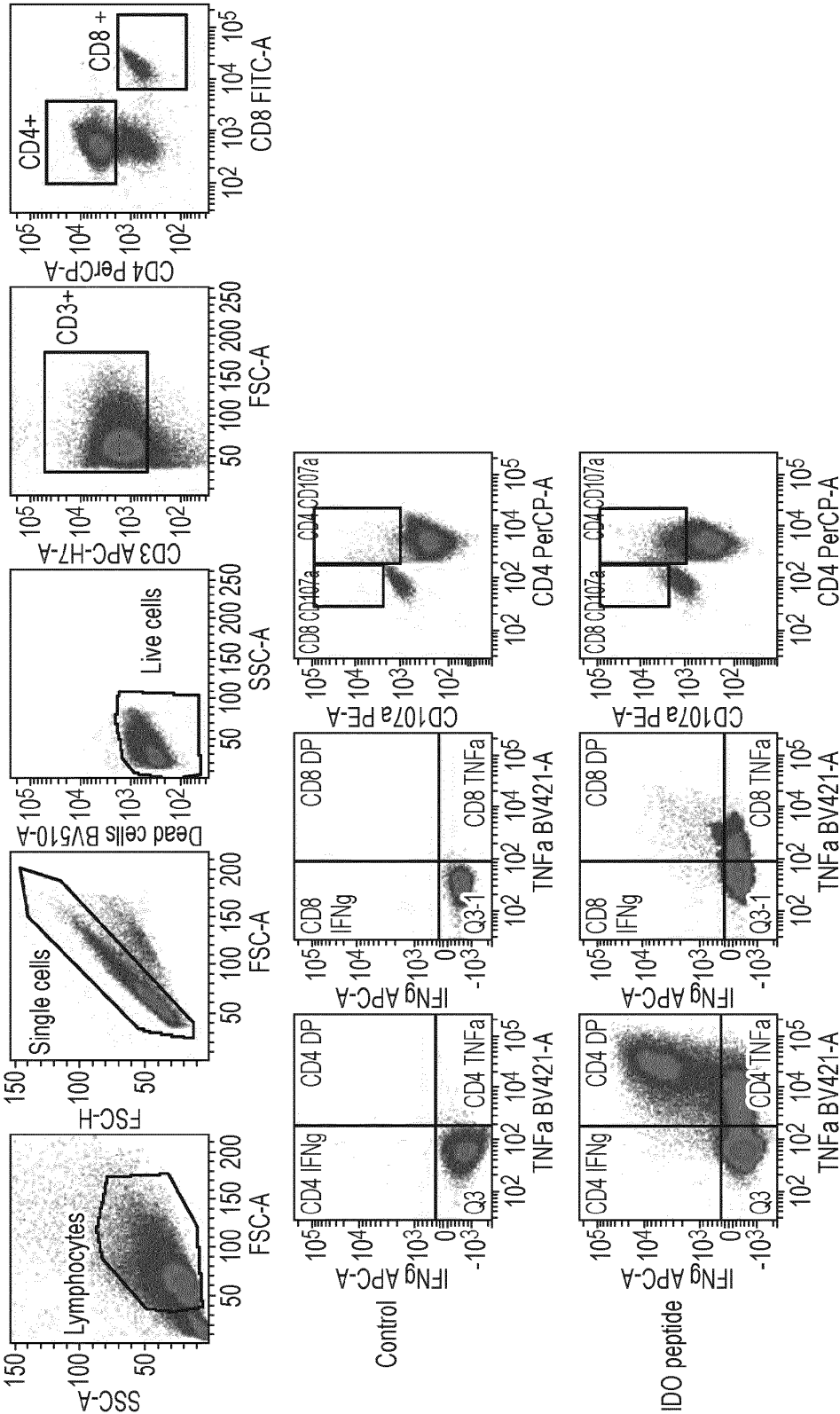
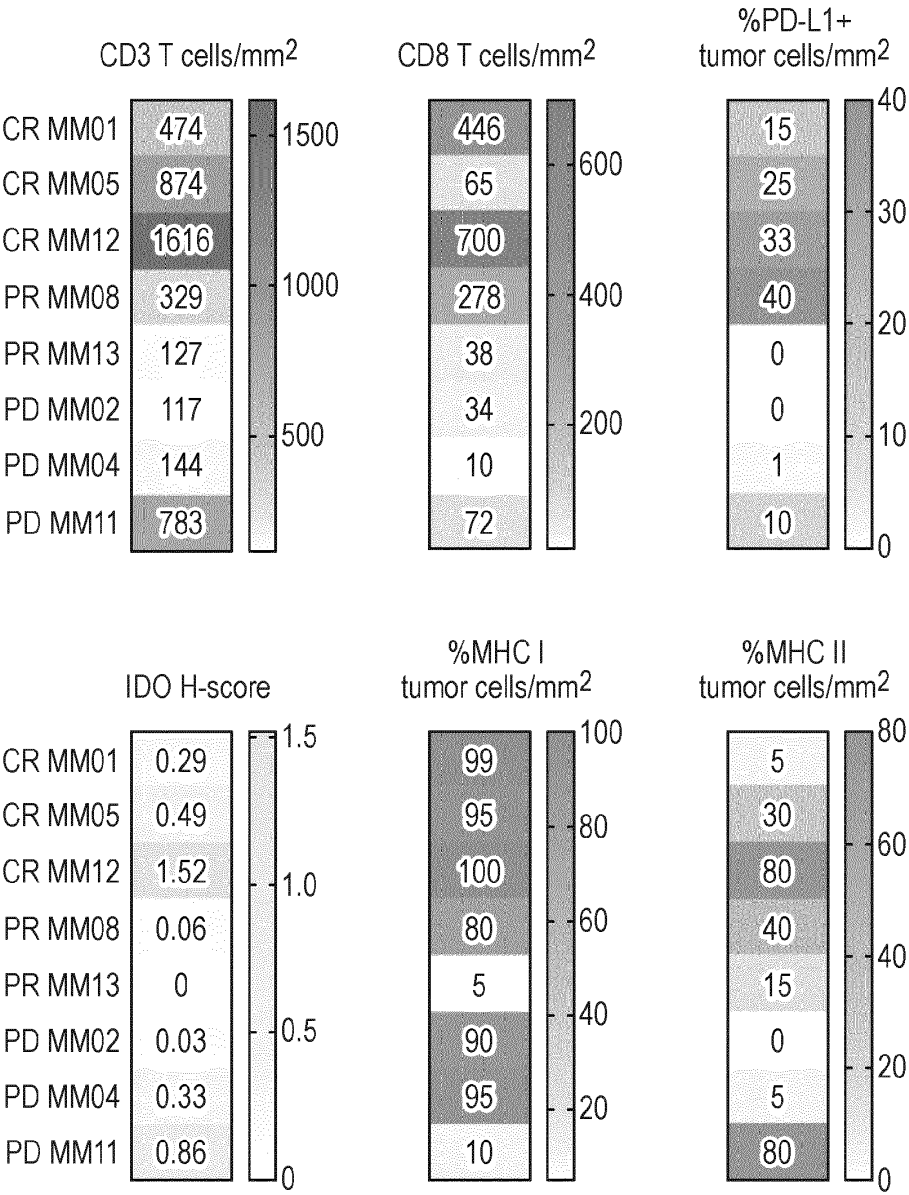


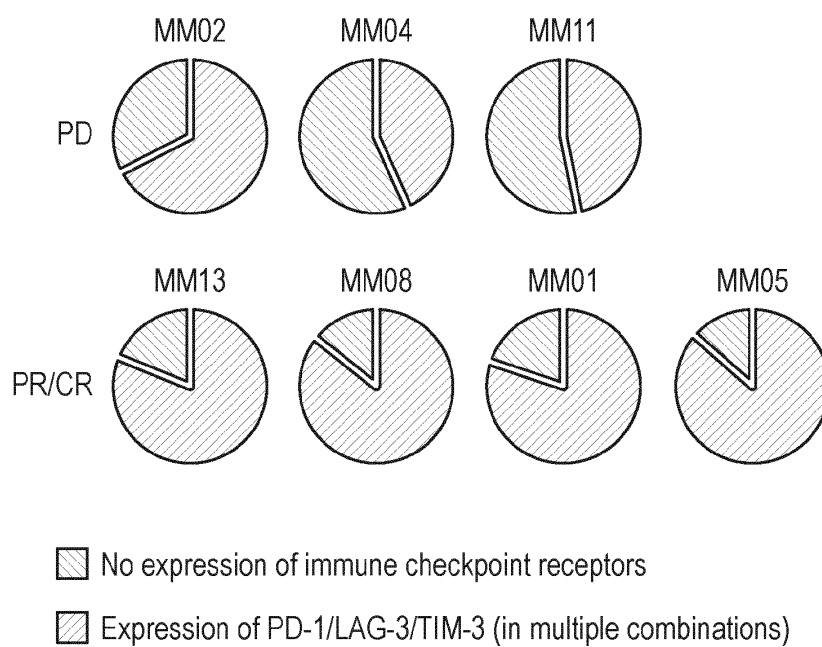
Fig. 16A



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Fig. 16B

Expression of exhaustion markers on CD8 T cells
on baseline biopsies



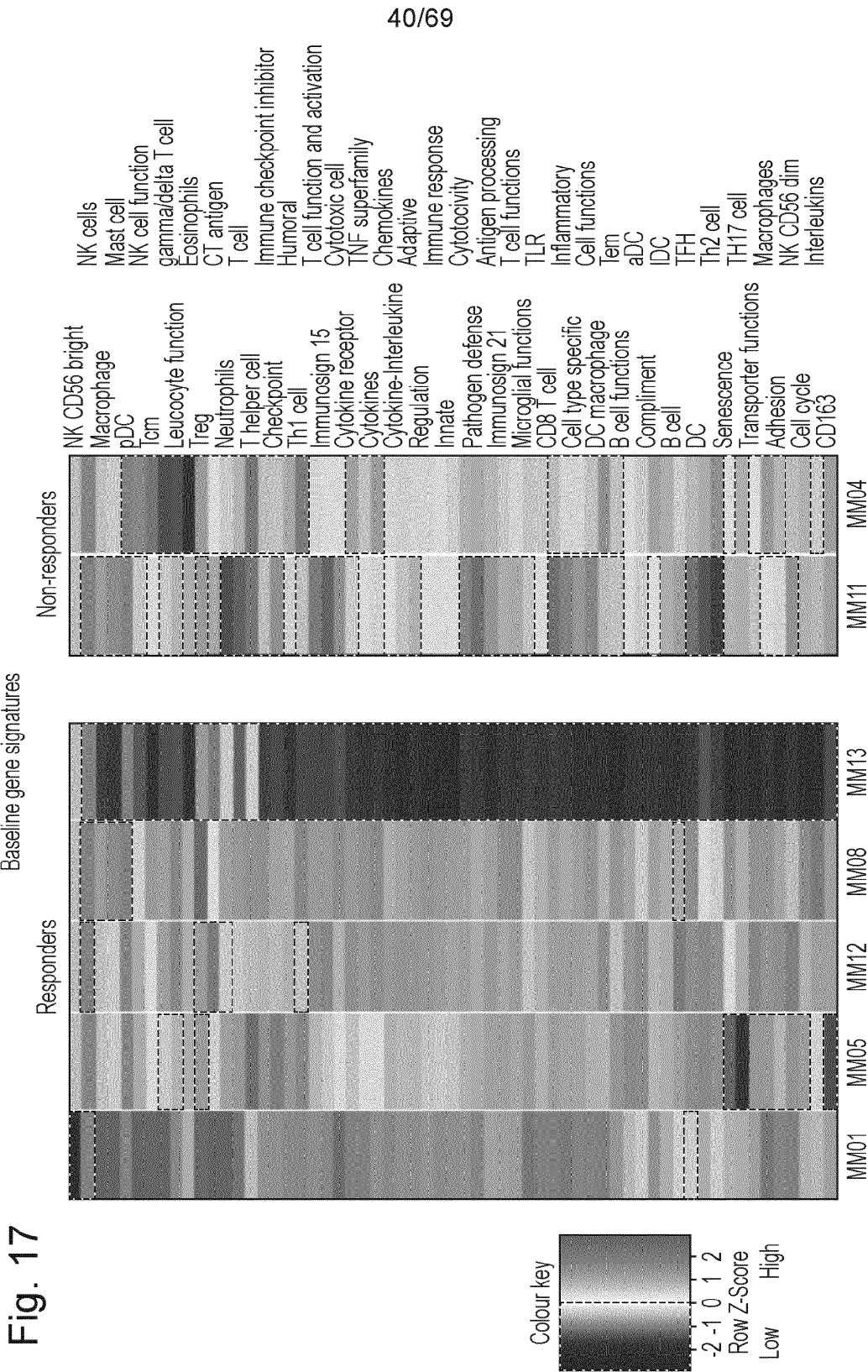


Fig. 18A

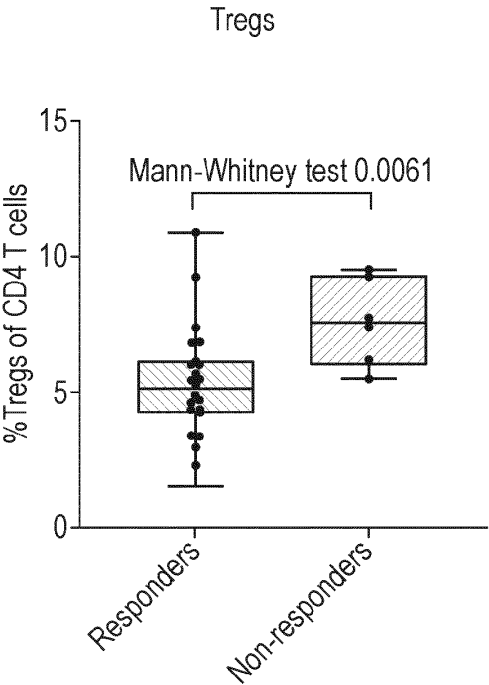


Fig. 18B

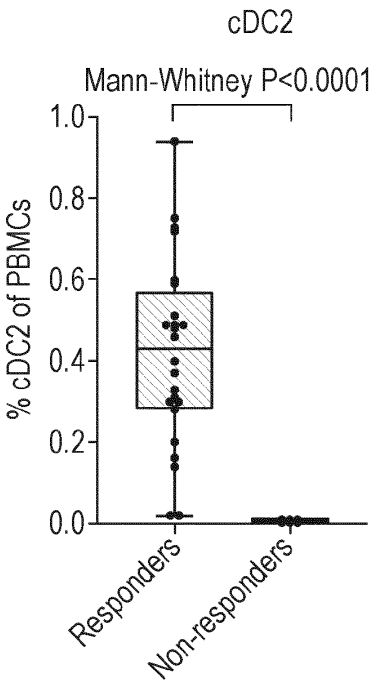


Fig. 18C

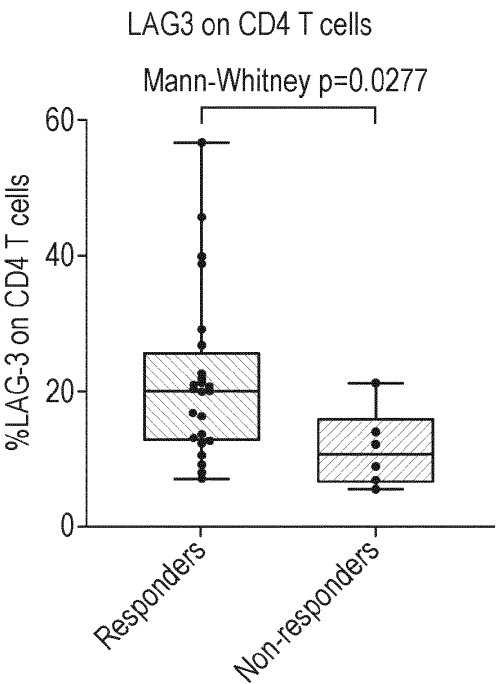
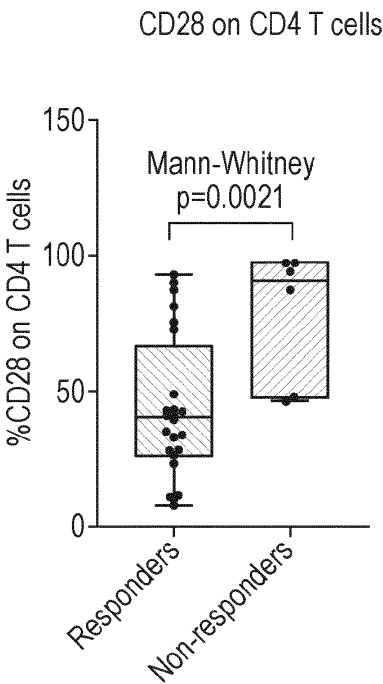


Fig. 18D



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Fig. 19A

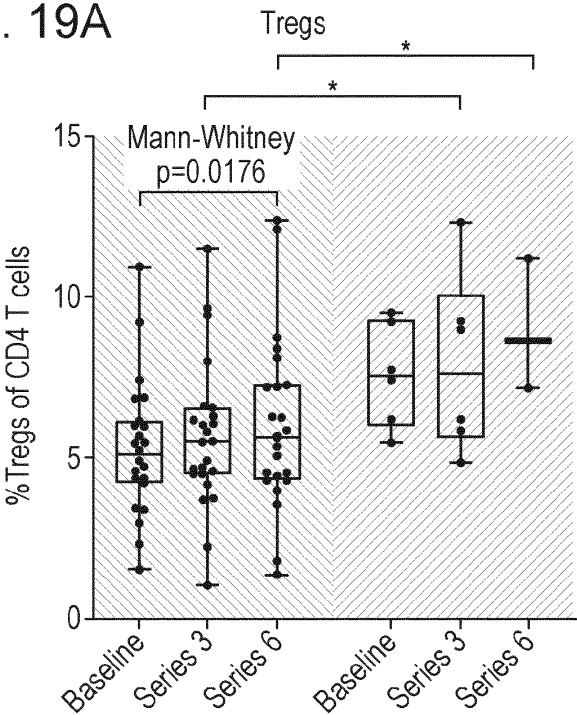


Fig. 19B

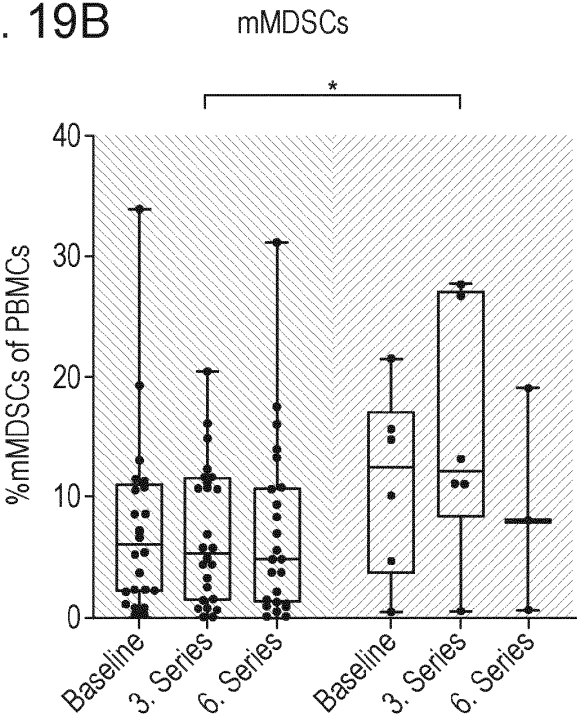


Fig. 20A

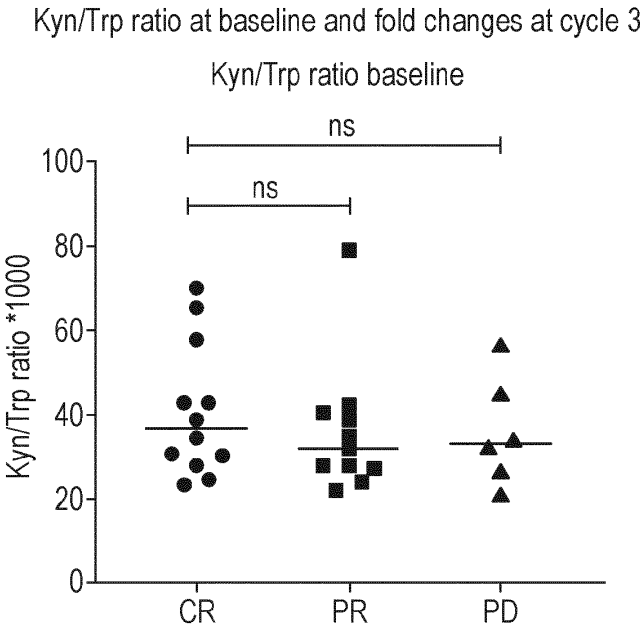


Fig. 20B

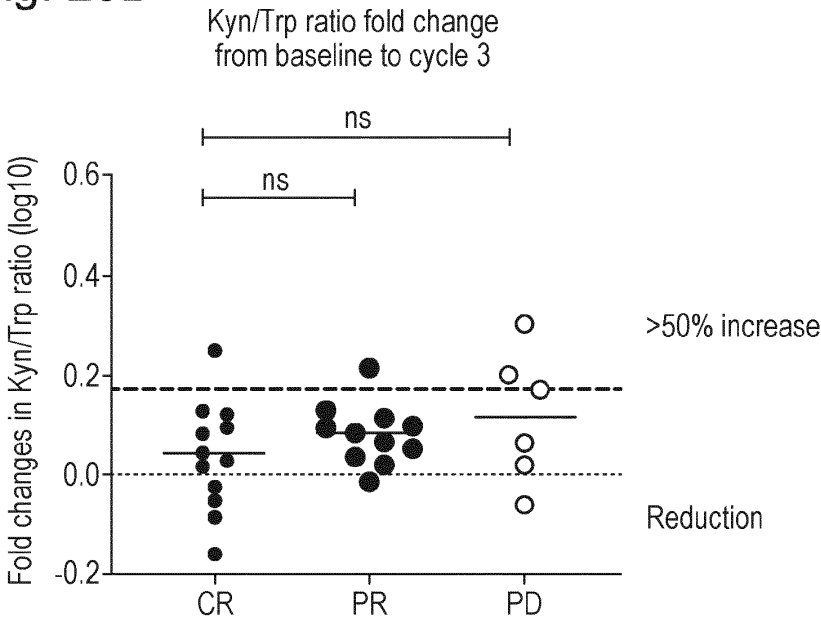


Fig. 21

Weeks	0	2	4	6	8	10	12	14	16	18	20	...
Nivolumab												...
IDO/PD-L1 vaccine												...
PET CT scan	CT						CT					...
Project blood sample												...
Project biopsy							x					

 Samples analysed for immune signatures in this study

Fig. 22A

mMDSCs

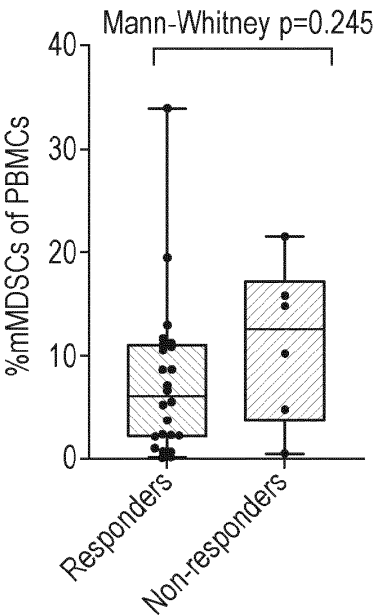


Fig. 22B

CD56dimCD16+ NK cells

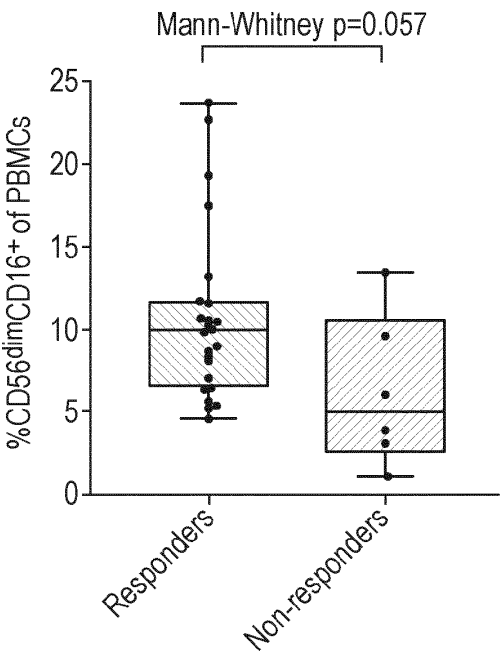


Fig. 22C

CD56brightCD16+ NK cells

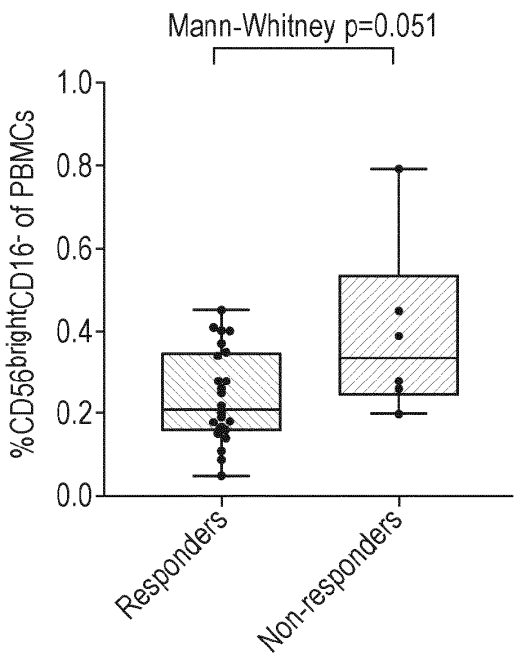
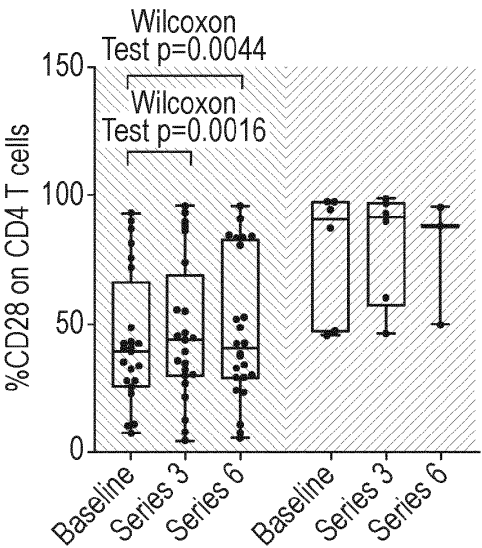


Fig. 23A

CD28



Treatment-induced
CD4 T cell changes

Fig. 23B

HLA-DR

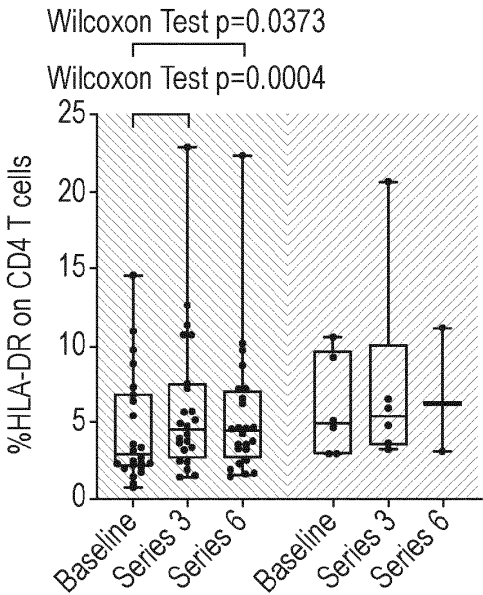


Fig. 23C

CD39

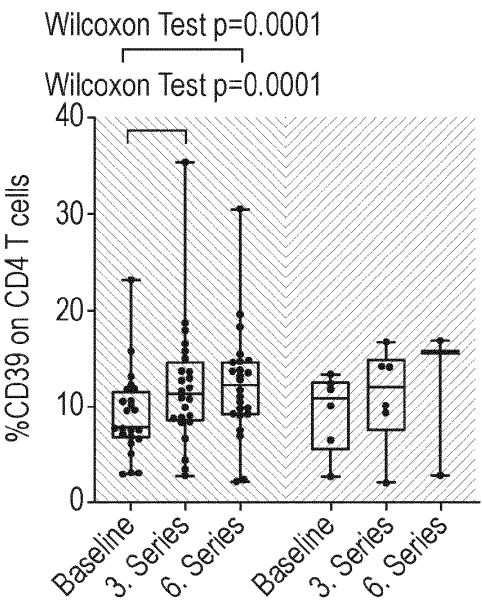
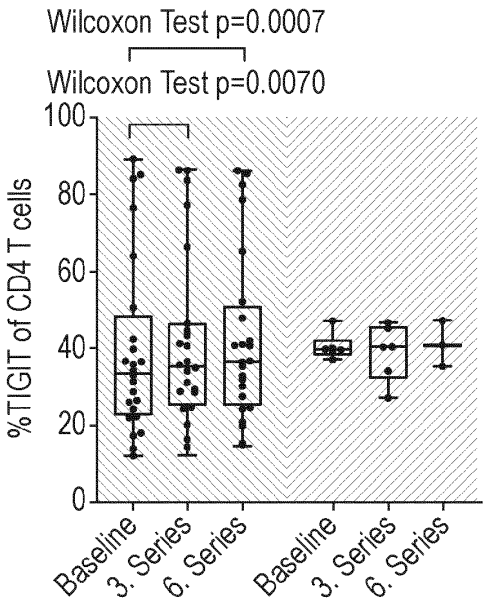


Fig. 23D

TIGIT



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Fig. 23E

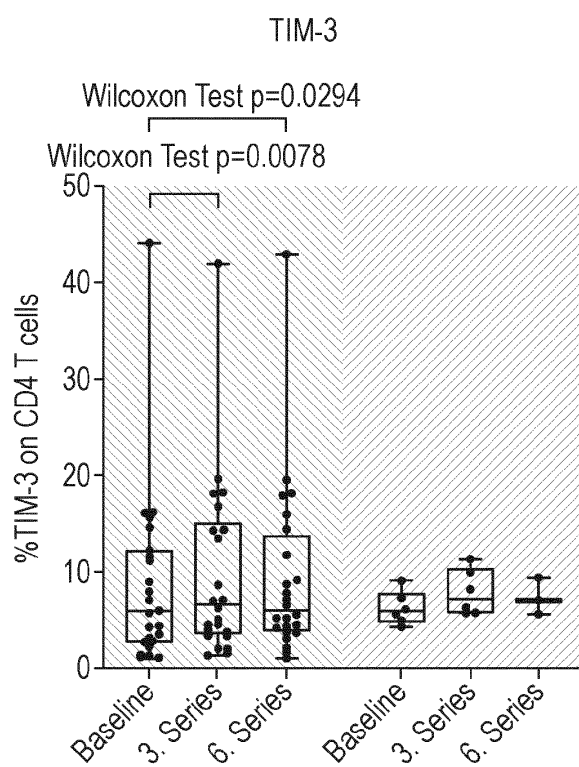
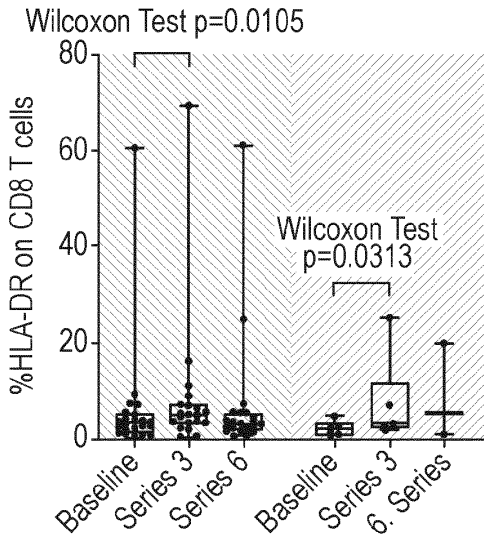


Fig. 24A

HLA-DR



Treatment-induced
CD8 T cell changes

Fig. 24B

CD39

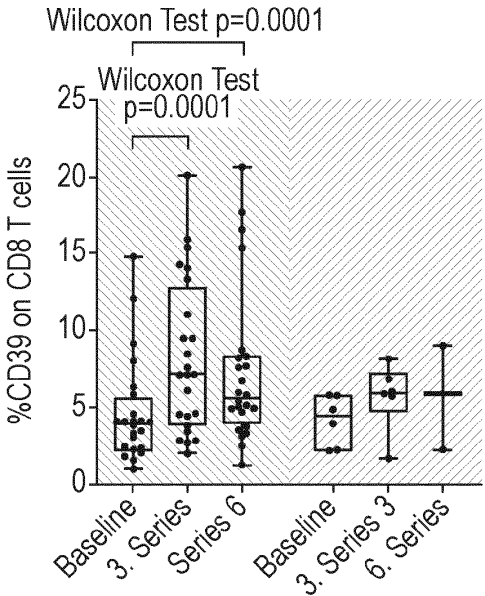


Fig. 24C

LAG-3

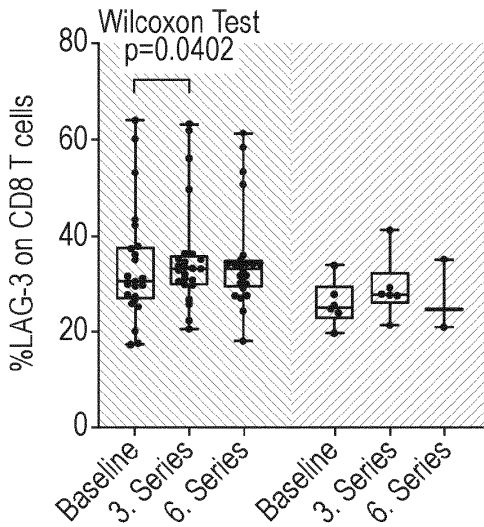
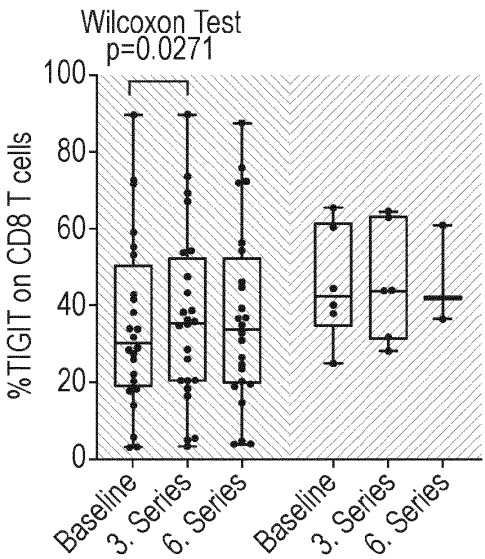


Fig. 24D

TIGIT



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Fig. 25

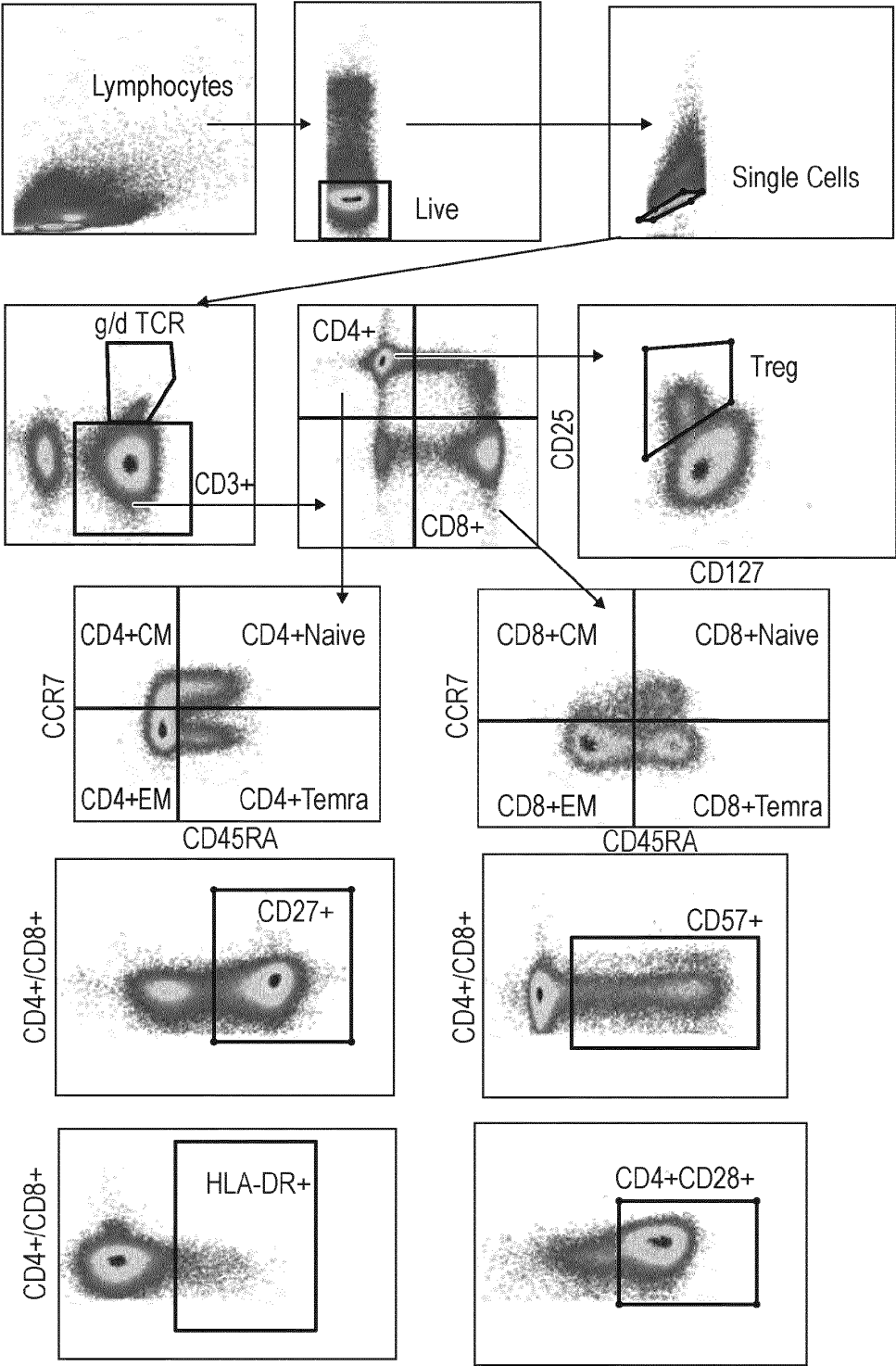
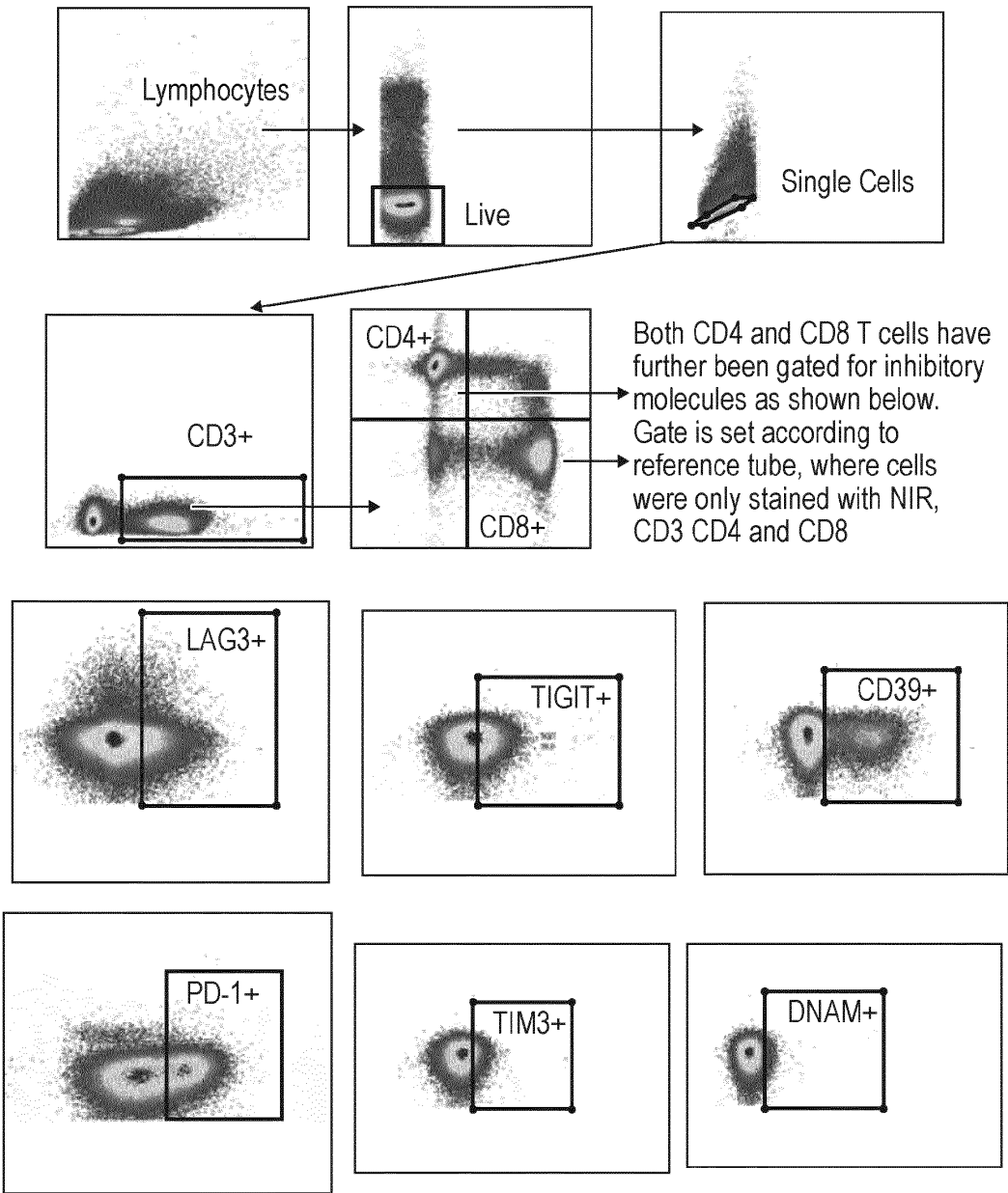
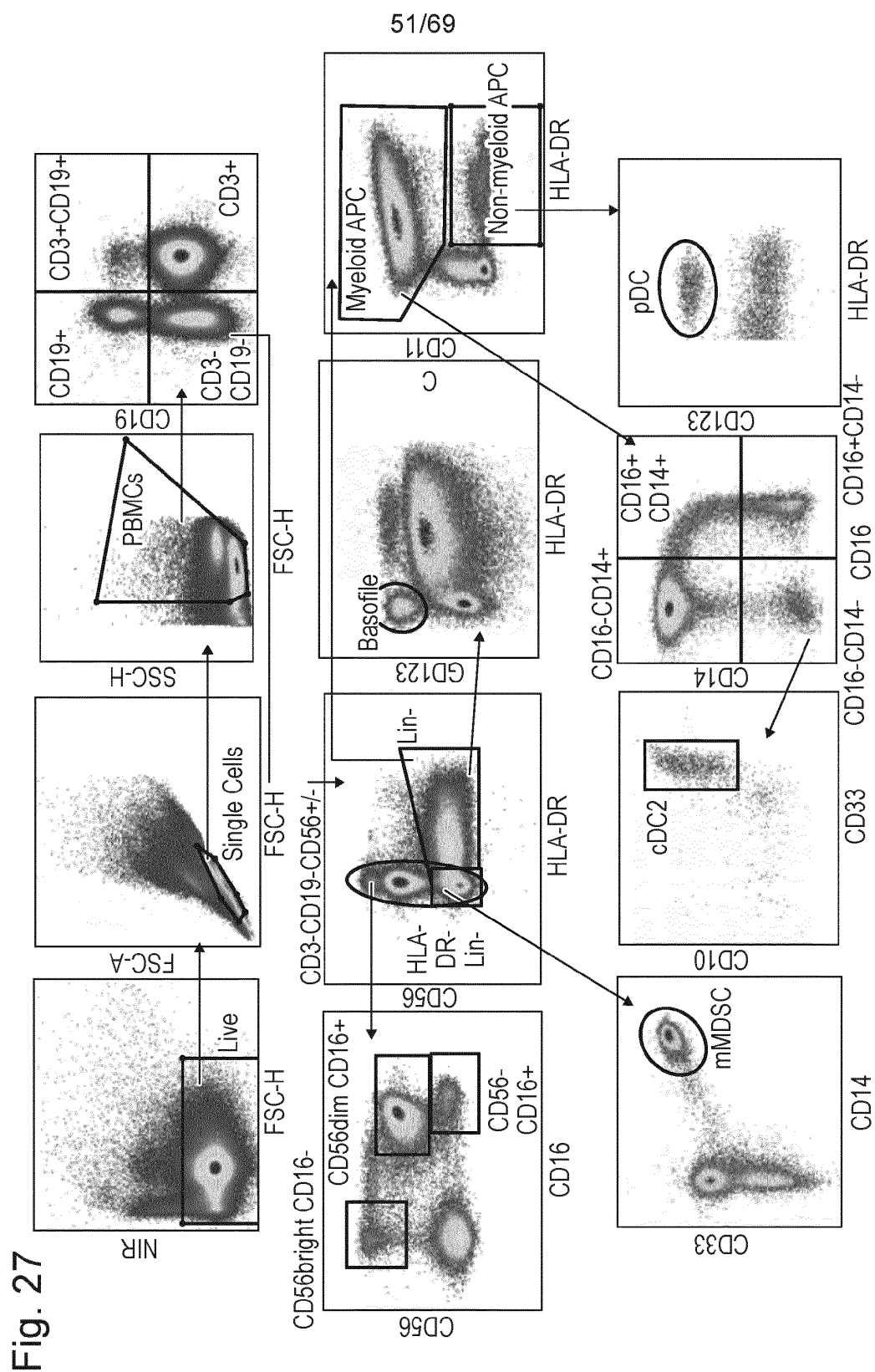


Fig. 26





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Fig. 28

Color	Reference Tube	Differentiated T cells Tube	Exhausted T cells Tube	Universal Tube
FITC	.	CD57 0.5 µl	LAG-3 0.5 µl	CD56 0.5 µl
PerCP. Cy5.6	.	HLA-DR 4 µl	.	HLA-DR 4 µl
APC	.	CD45RA 4 µl	CD45RA 4 µl	CD1c 1 µl
APC. R700	.	CD25 µl	.	.
APC. Cy7	NiR dye	NiR dye	NiR dye	NiR dye
BV421	.	γδ TCR 1 µl	CD39 0.5 µl	NKG2a 0.25 µl
BV610	CD4 1 µl	CD4 1 µl	CD4 1 µl	CD33 1m
BV605	.	CD28 1 µl	.	CD123 2 µm
BV650	.	CD127 2 µl	TIGIT 2 µm	CD16 4 µl
BV711	.	CD27 5 µl	.	CD19 2 µl
BV786	CD3 2 µl	CD3 2 µl	CD3 2 µl	CD3 2 µl
PE	.	CDR7 1 µl	CDR7 1 µl	CD11c 2 µl
PE- CF594	CD8 2 µl	CD8 2 µl	CD8 2 µl	CD14 2 µl
PE-Cy7	.	PD-1 2 µl	PD-1 2 µl	PD-1 2 µl

Fig. 28 (Cont.)

Antibodies for extracellular mixing

Company	Name	Cat. Nr.
BD Bioscience	BV421 Mouse Anti-Human TCR $\gamma\delta$ (B1)	562660
BD Bioscience	BD Horizon™ BV421 Mouse Anti-Human CD39 (TU66)	563679
BD Bioscience	BD OptiBuild™ BV421 Mouse Anti-Human NKG2A (CD159a) (131411)	747924
BD Bioscience	BD Horizon™ BV510 Mouse Anti-Human CD4 (SK3)	561920
BD Bioscience	BD Horizon™ BV510 Mouse Anti-Human CD33 (WM53)	563257
BD Bioscience	BD OptiBuild™ BV605 Mouse Anti-Human CD28 (L293)	742527
BD Bioscience	BD Horizon™ BV605 Mouse Anti-Human CD123 (7g3)	564197
Nordic Biosite	Brilliant Violet 650™ anti-Human CD127 (IL-7R α)(A019D5)	351325
BD Bioscience	BD OptiBuild™ BV650 Mouse Anti-Human TIGIT (741182)	747840
BD Bioscience	BD Horizon™ BV650 Mouse Anti-Human CD16 (3g8)	563692
BD Bioscience	BD Horizon™ BV711 Mouse Anti-Human CD27 (L128)	563167
BD Bioscience	BD Horizon™ BV711 Mouse Anti-Human CD19 (SJ25C1)	563038
BD Bioscience	BD Horizon™ BV786 Mouse Anti-Human CD3 (sk7)	563800
BD Bioscience	BD Pharmingen™ FITC Mouse Anti-Human CD57 (NK-1)	555619
LS Bio	IHCPlus™ Monoclonal LAG3 Antibody (clone 17B4, FITC, aa70-99, IHC) LS-B2237	LS-B2237
BD Bioscience	FITC Mouse Anti-Human CD56 (NCAM16.2)	340410
BD Bioscience	BD Pharmingen™ PerCP-Cy™ 5.5 Mouse Anti-Human HLA-DR (G46-6)	560652
Nordic Biosite	PE anti-human CD197 (CCR7) (G043H7)	353204
BD Bioscience	PE Mouse Anti-Human CD11c (S-HCL-3)	347637
BD Bioscience	BD Horizon™ PE-CF594 Mouse Anti-Human CD8 (HIT8alpha)	566860
BD Bioscience	BD Horizon™ PE-CF594 Mouse Anti-Human CD14 (M ϕ P9)	562335
BD Bioscience	BD Pharmingen™ PE-Cy™ Mouse anti-Human CD279 (PD-1) (EH12.1)	561272
BD Bioscience	BD Pharmingen™ APC Mouse Anti-Human CD45RA (H1100)	550855

Fig. 29A

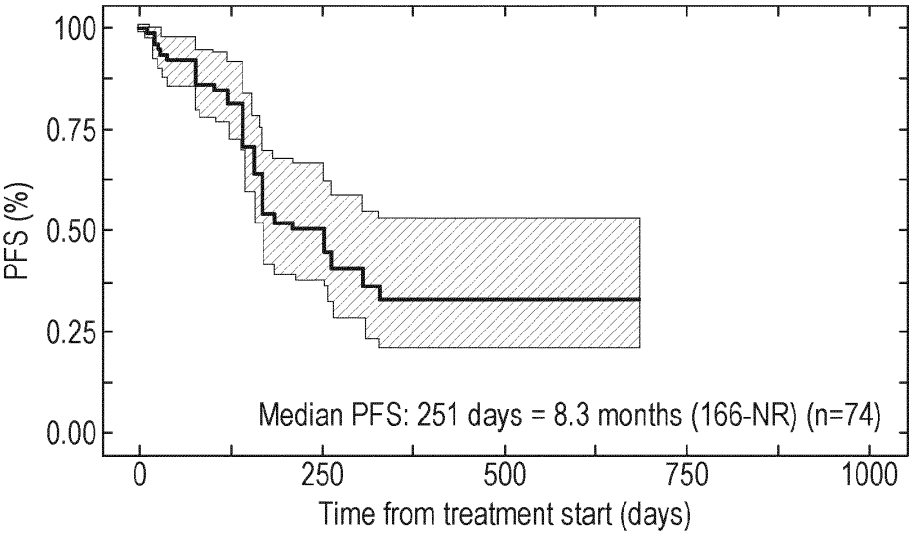


Fig. 29B

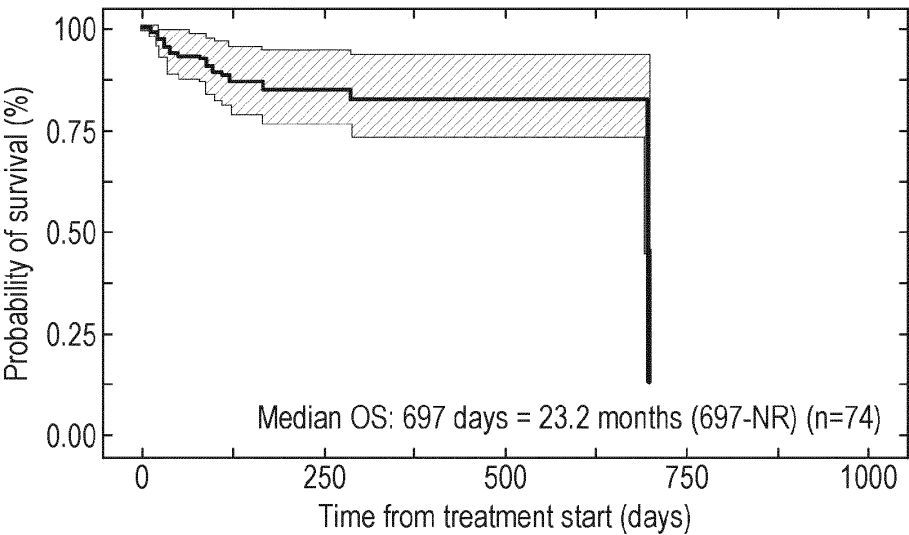


Fig. 30A

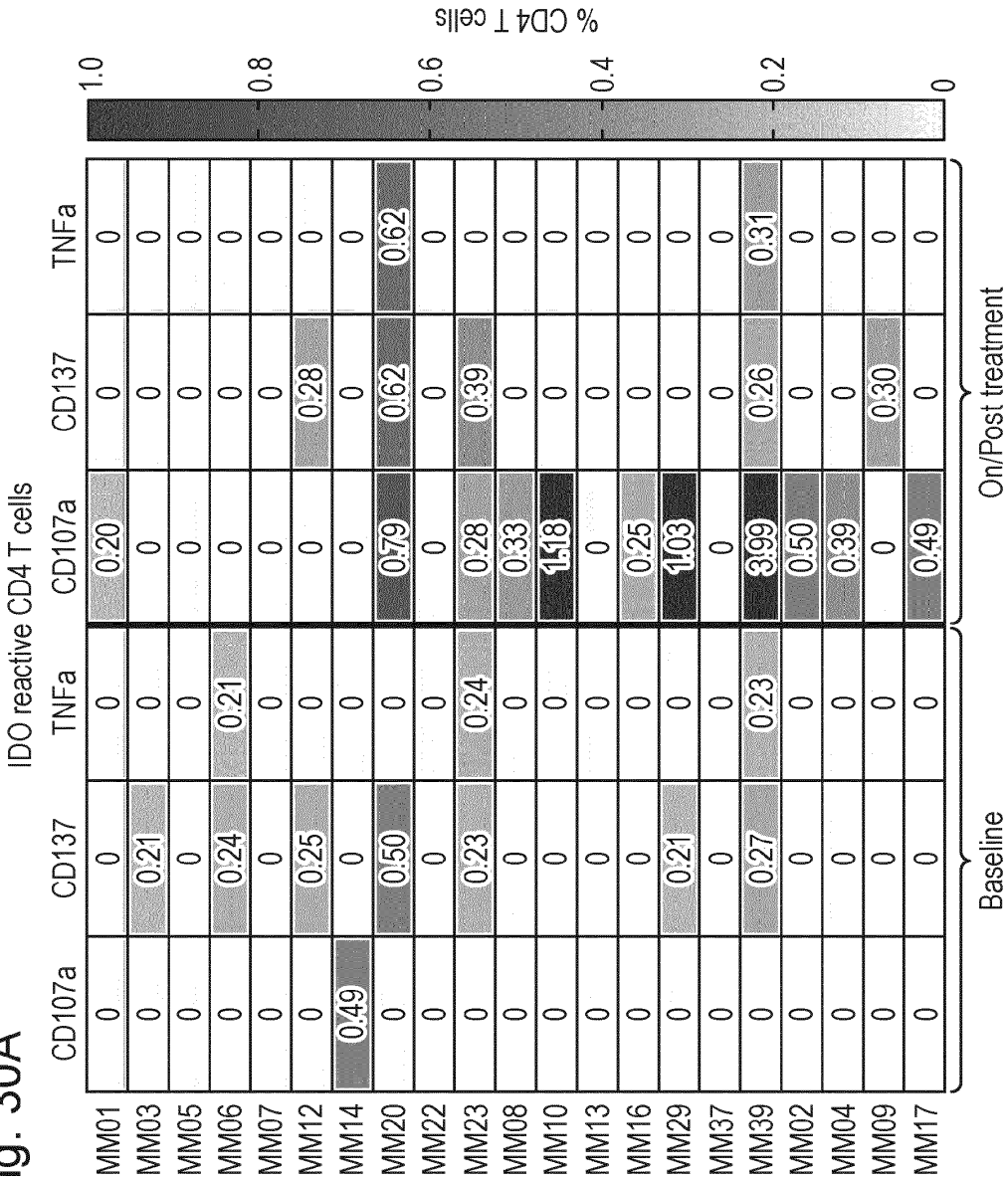


Fig. 30A (Cont.)

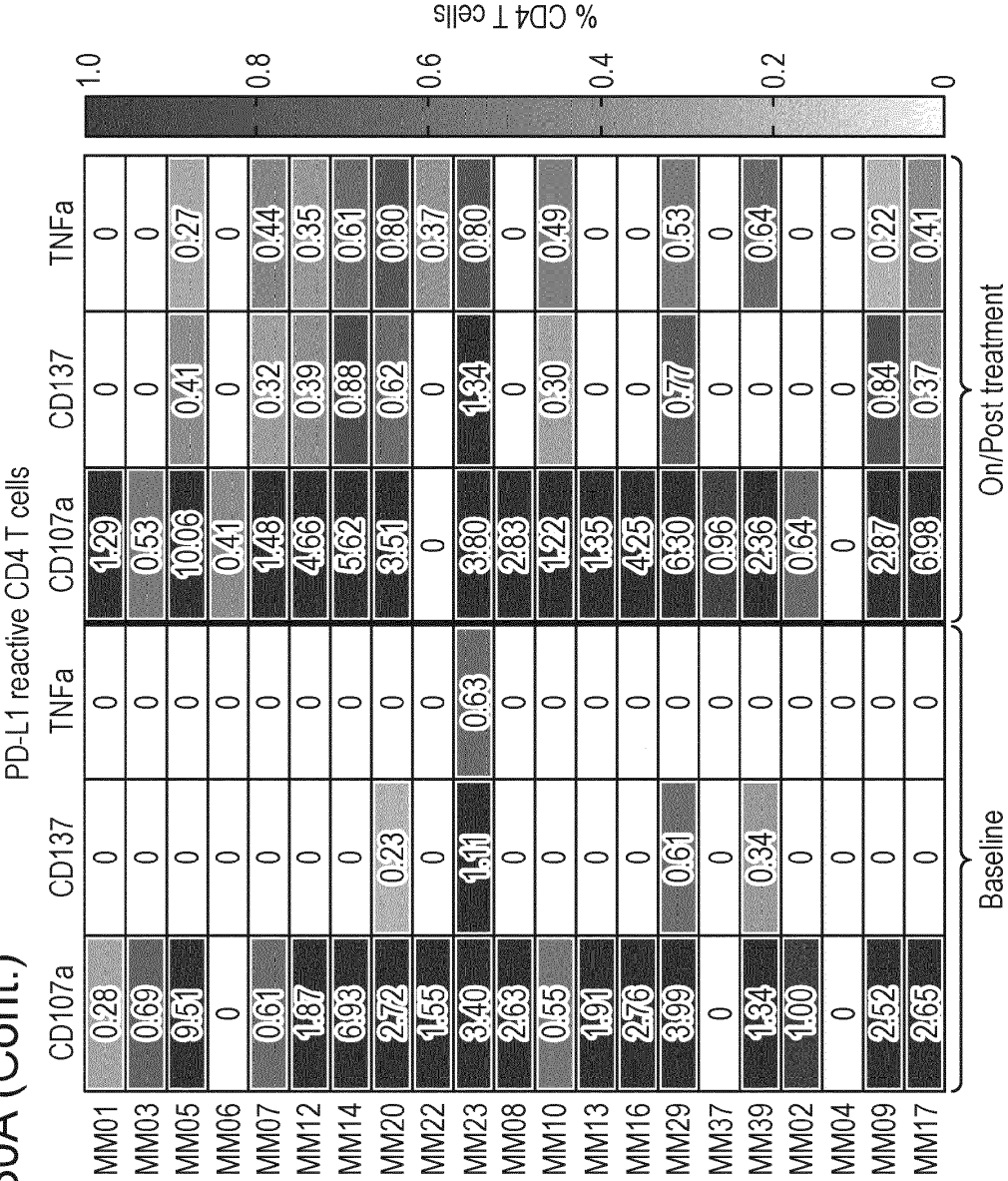


Fig. 30B

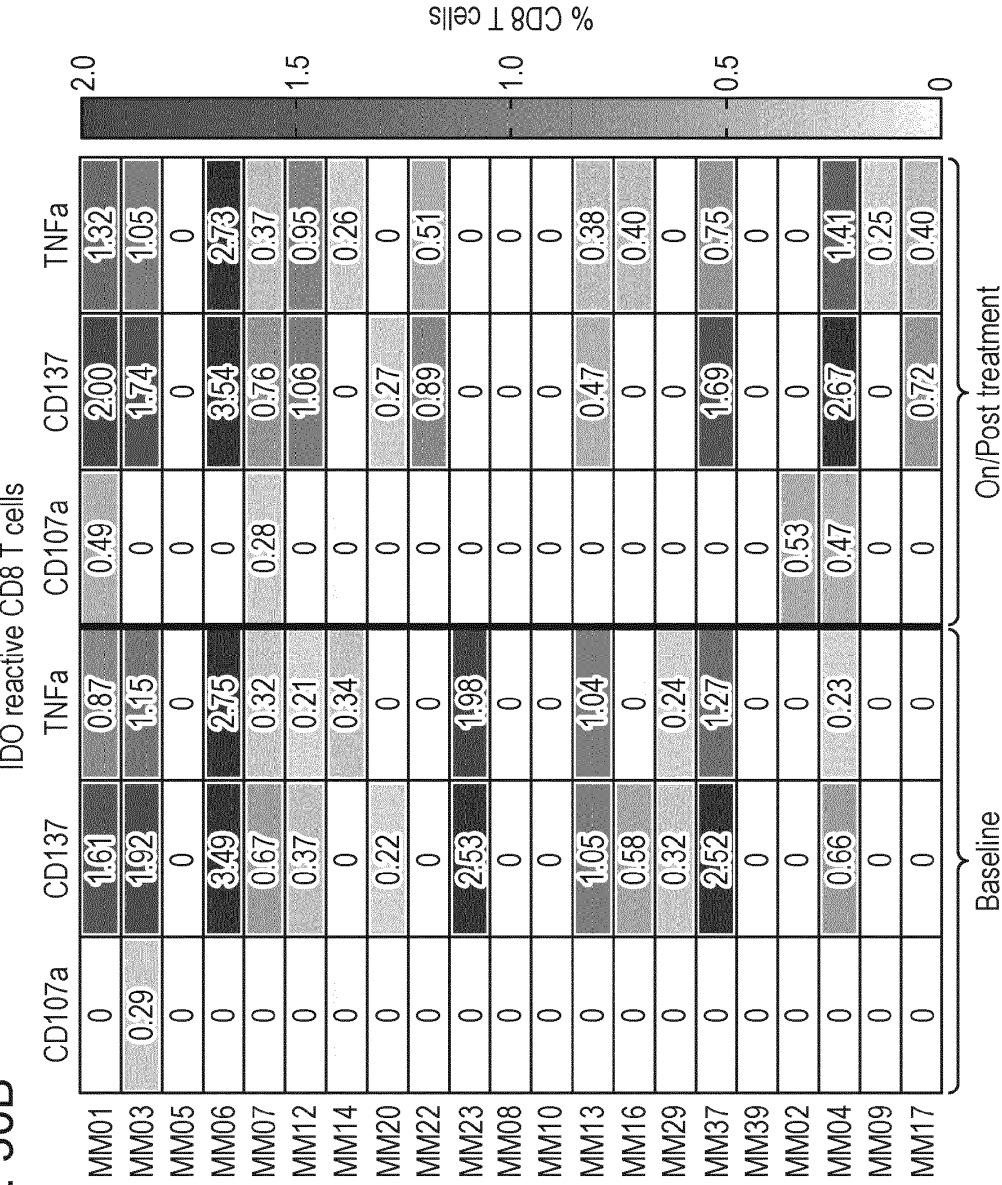
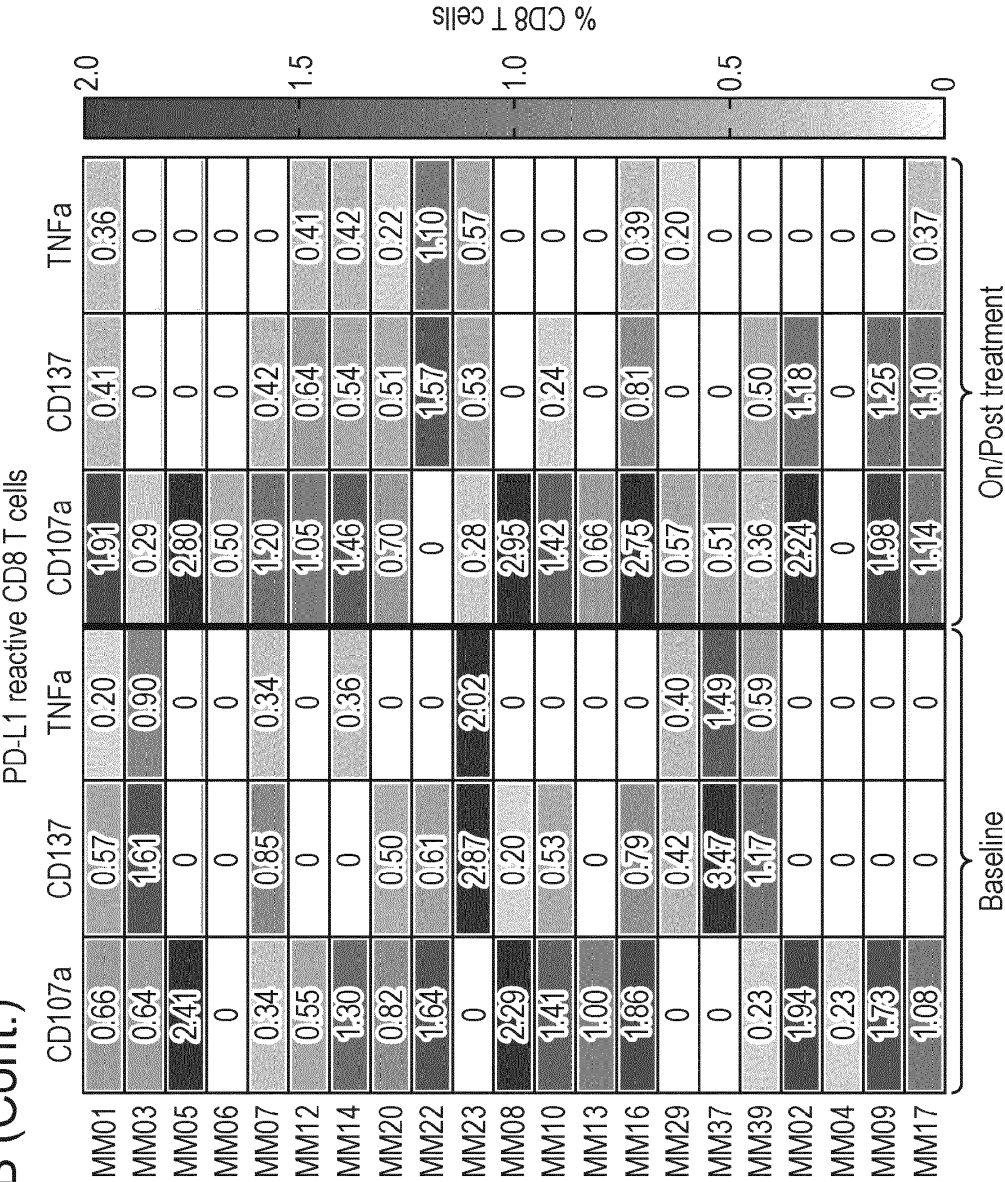
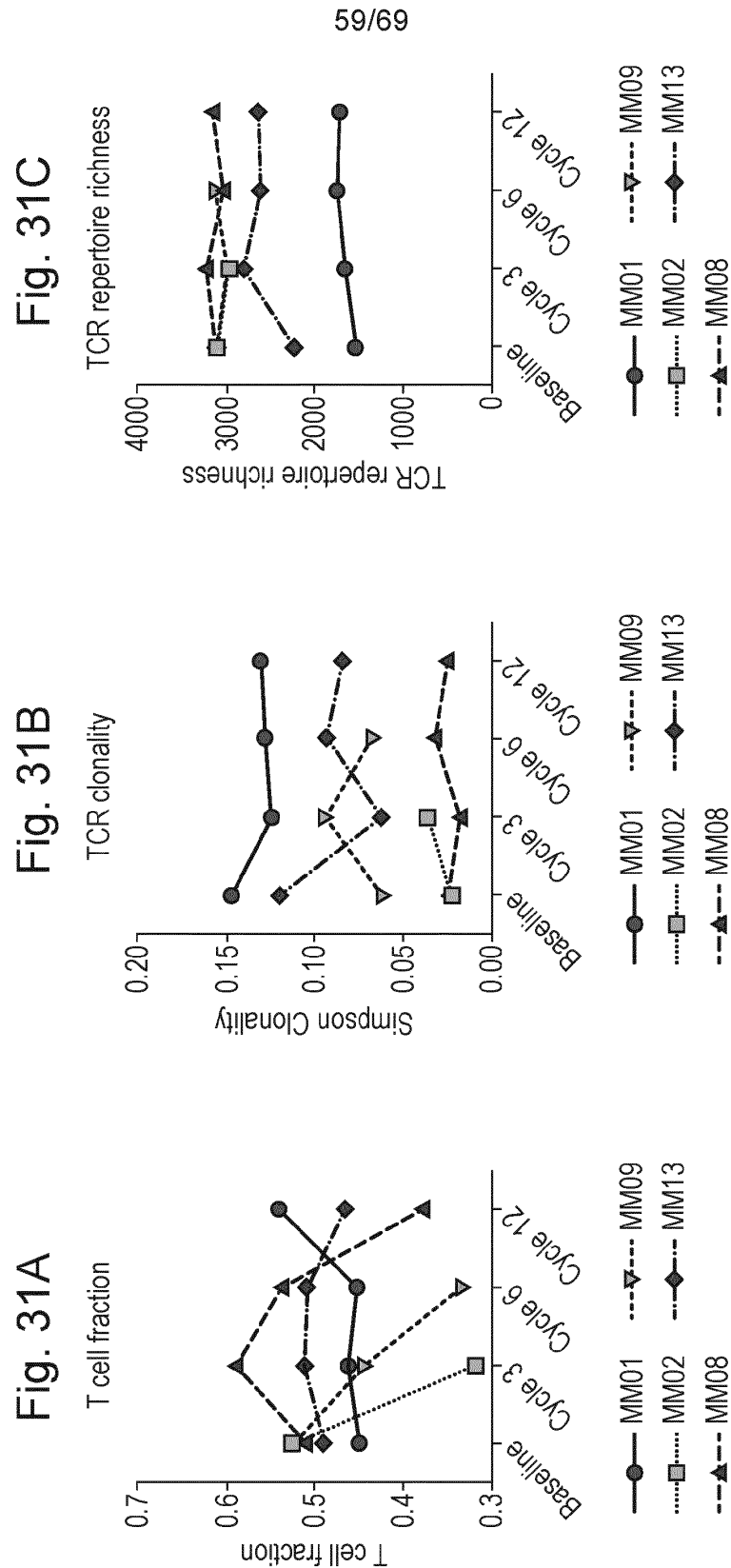
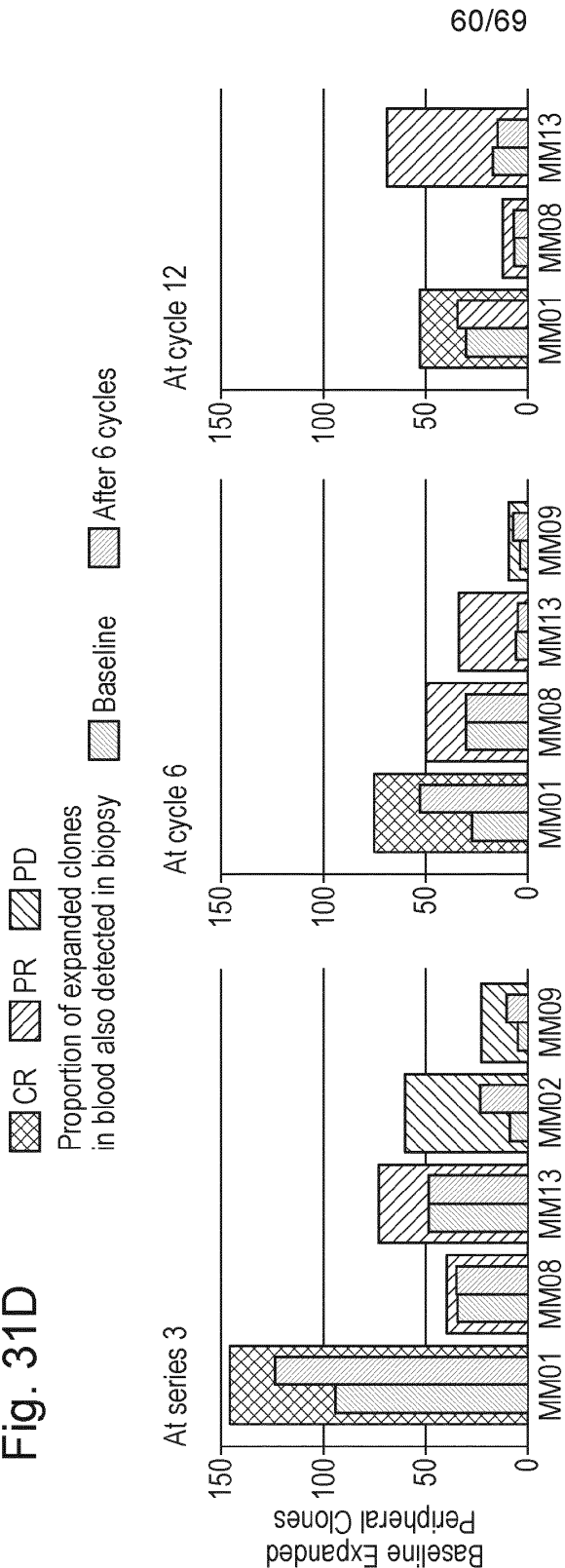


Fig. 30B (Cont.)







Clone (patient ID)	Dominant TCR β chain frequency
PDL1 clone (MM1636.14)	85.7%
IDO clone (MM1636.23)	99.9%
IDO clone (MM1636.14)	91.4%

Fig. 31E

Fig. 32A

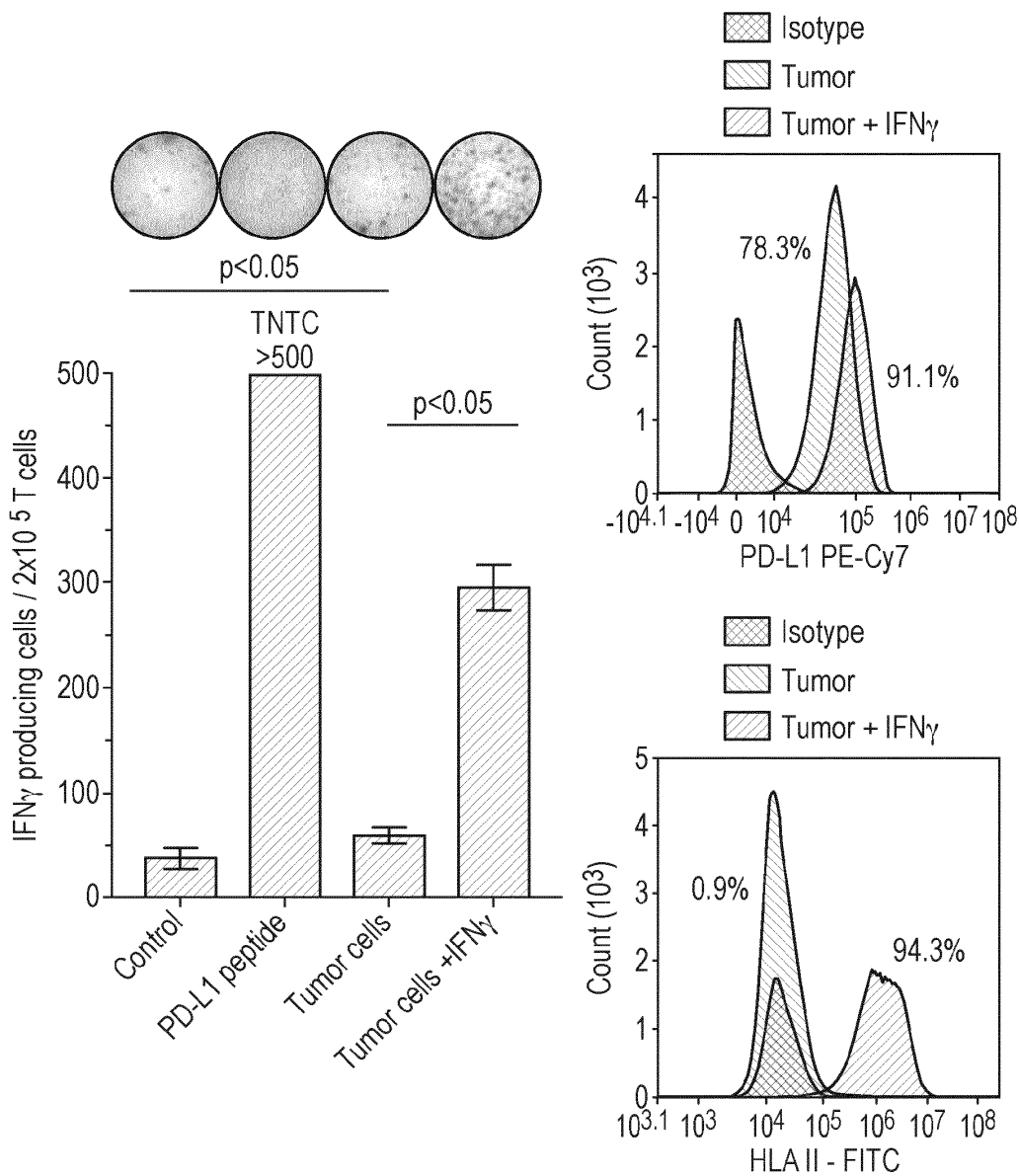
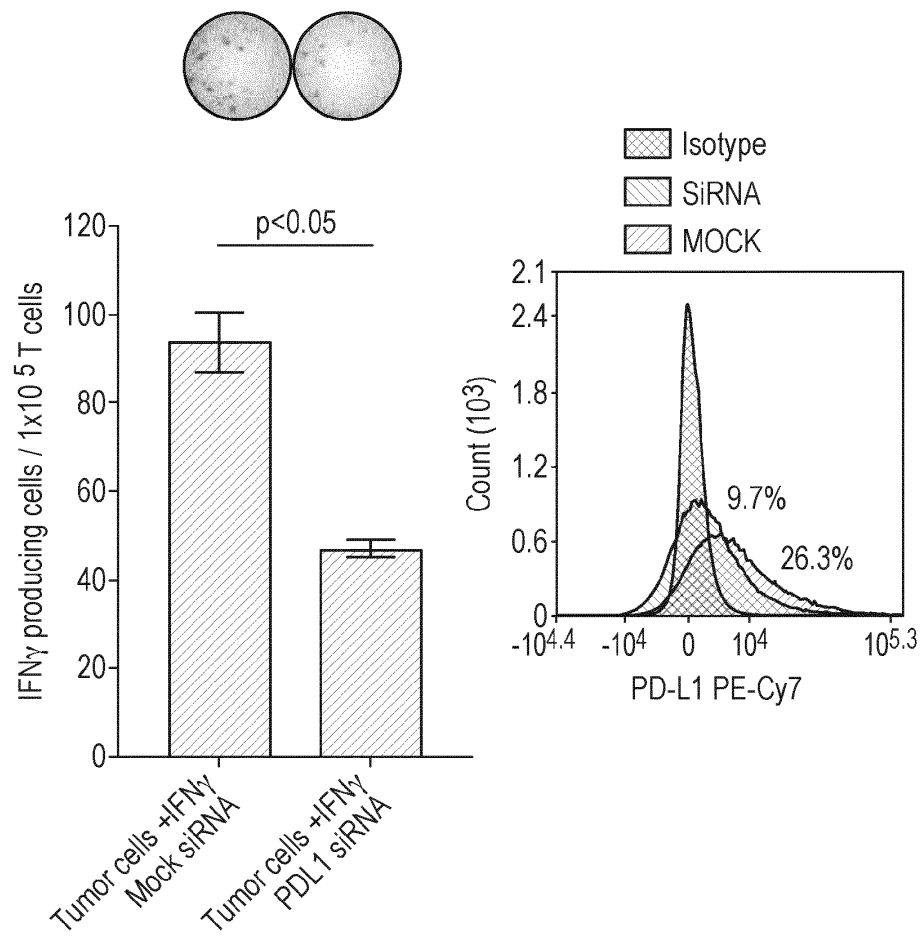


Fig. 32B



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Fig. 32C

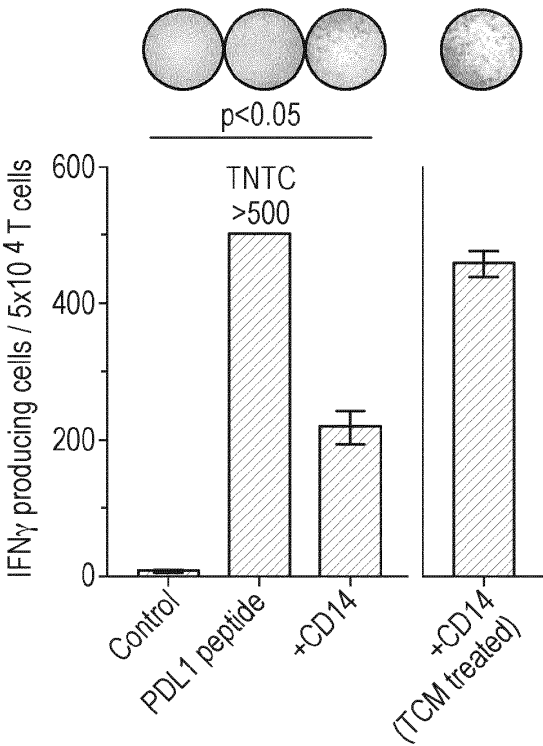


Fig. 32D

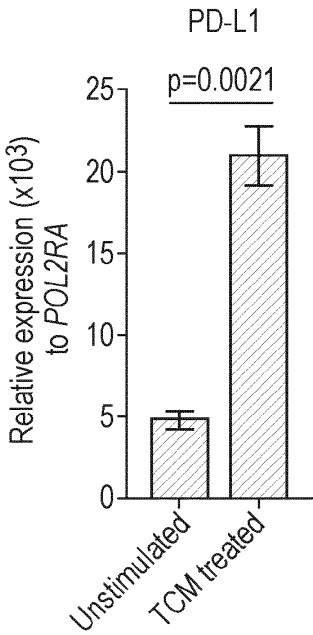


Fig. 32E

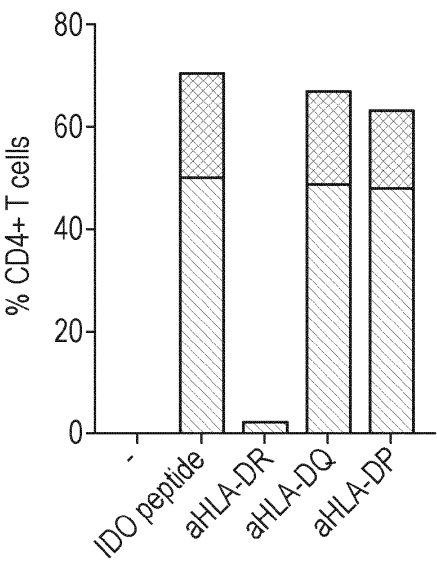


Fig. 32F

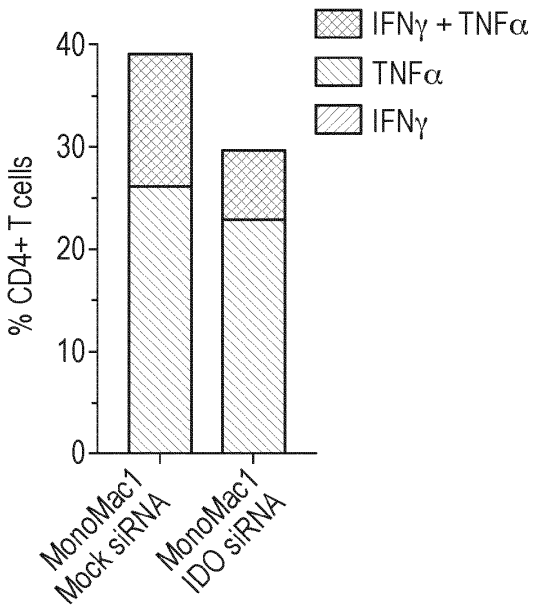


Fig. 32G

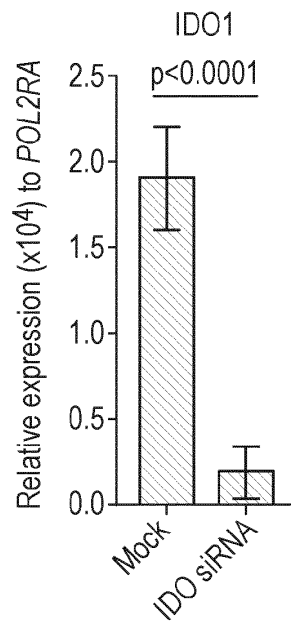


Fig. 32H

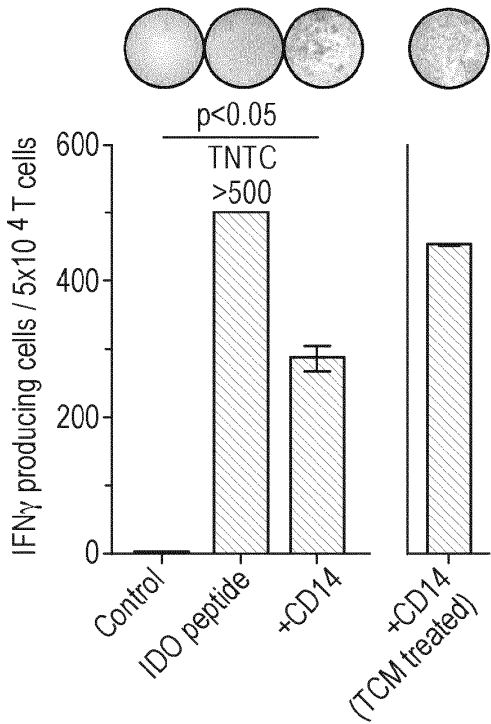
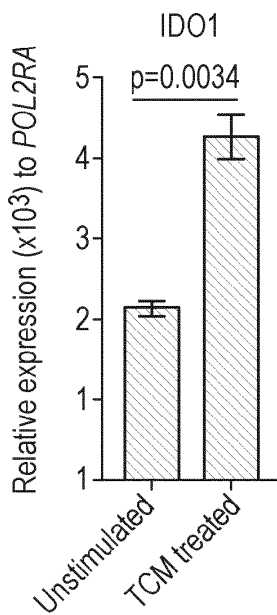
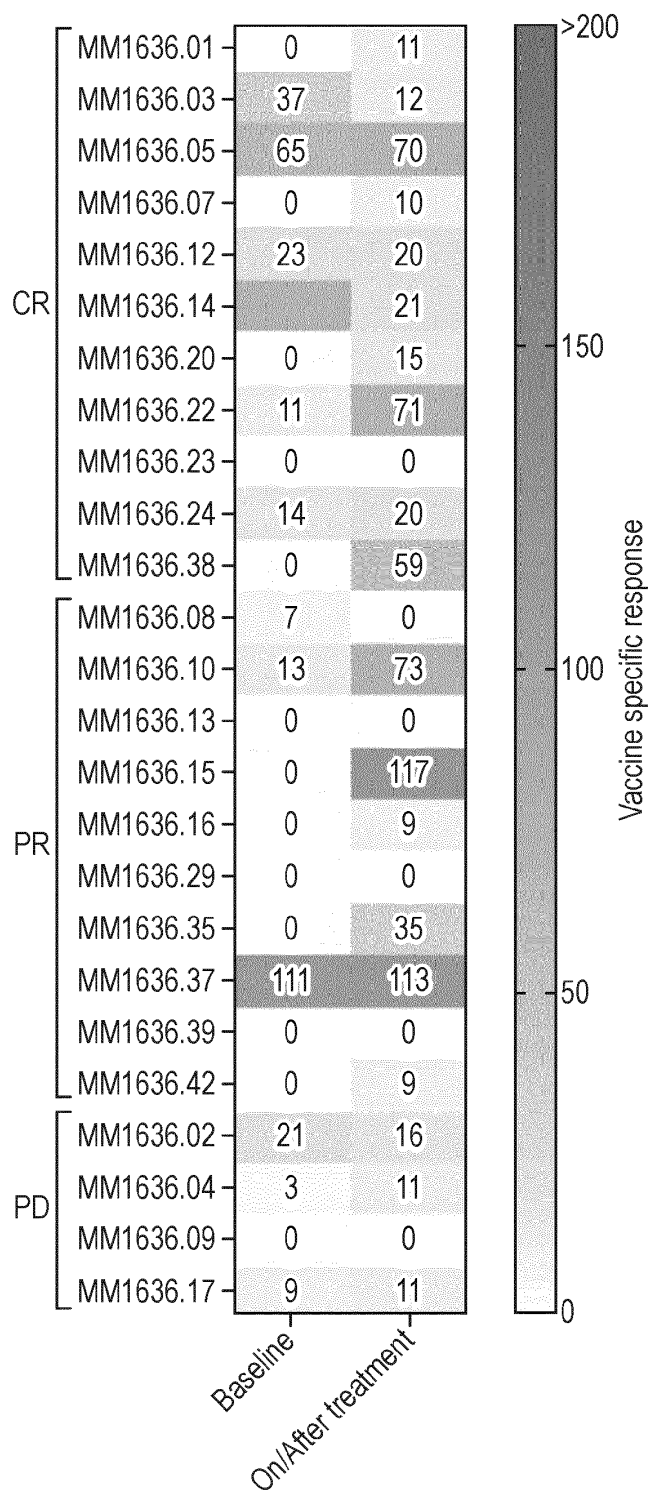


Fig. 32I



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Fig. 33A

Ex vivo IDO specific responses in peripheral blood
before and on/after vaccination

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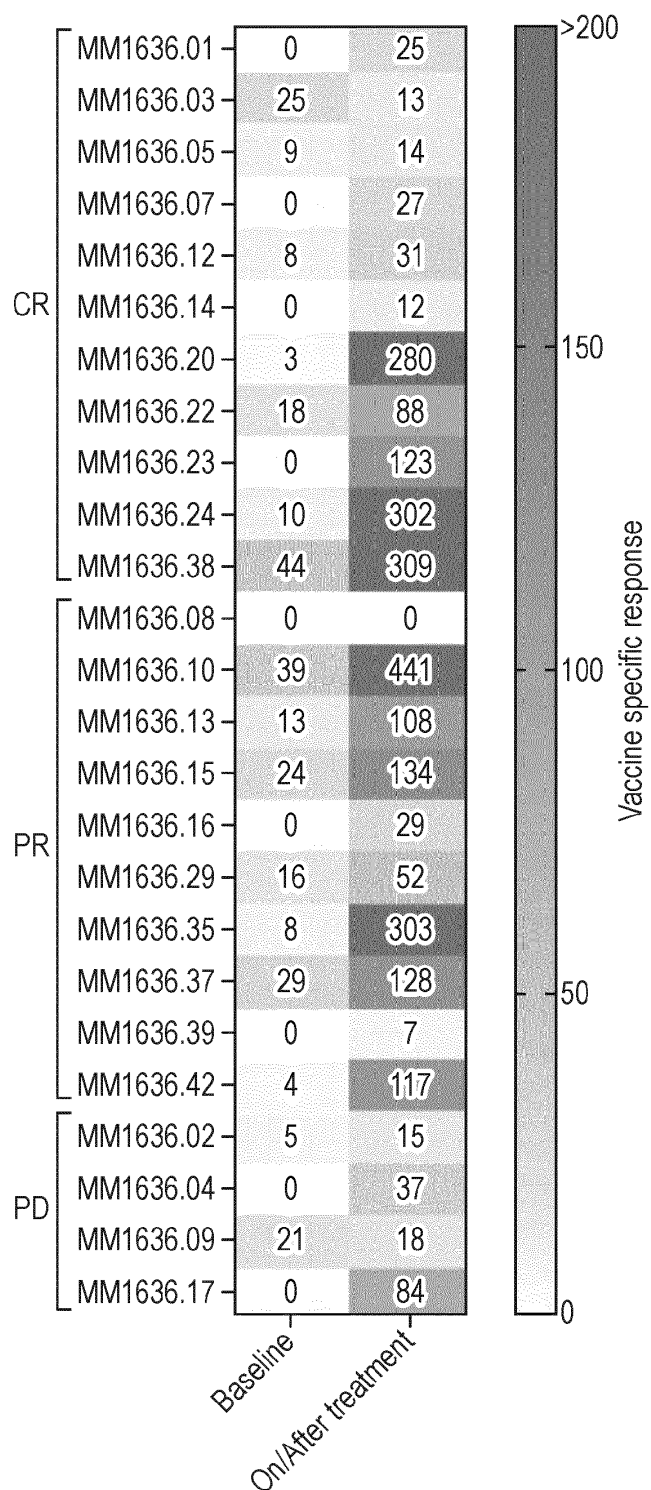
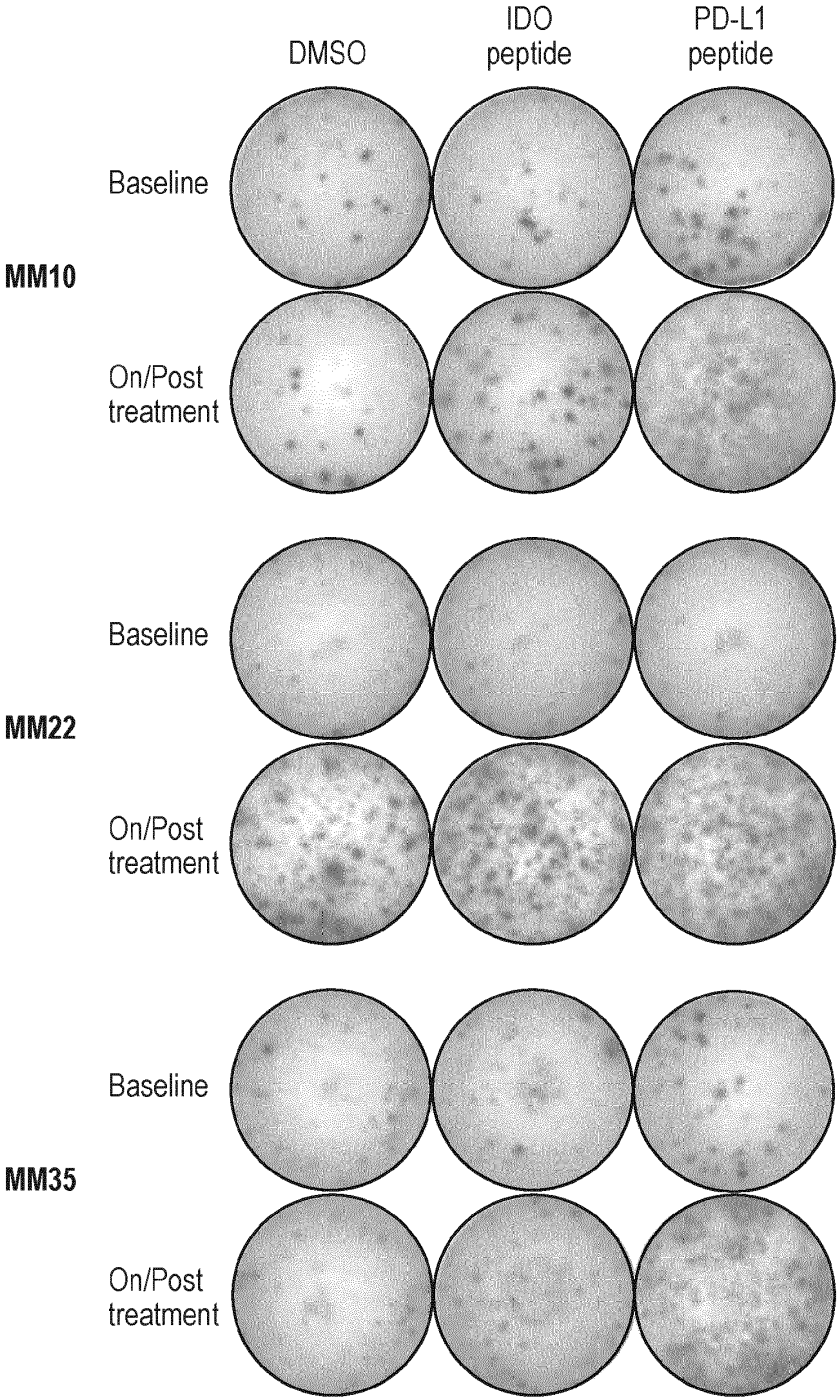
Fig. 33BEx vivo PD-L1 specific responses in peripheral blood
before and on/after vaccination

Fig. 33C



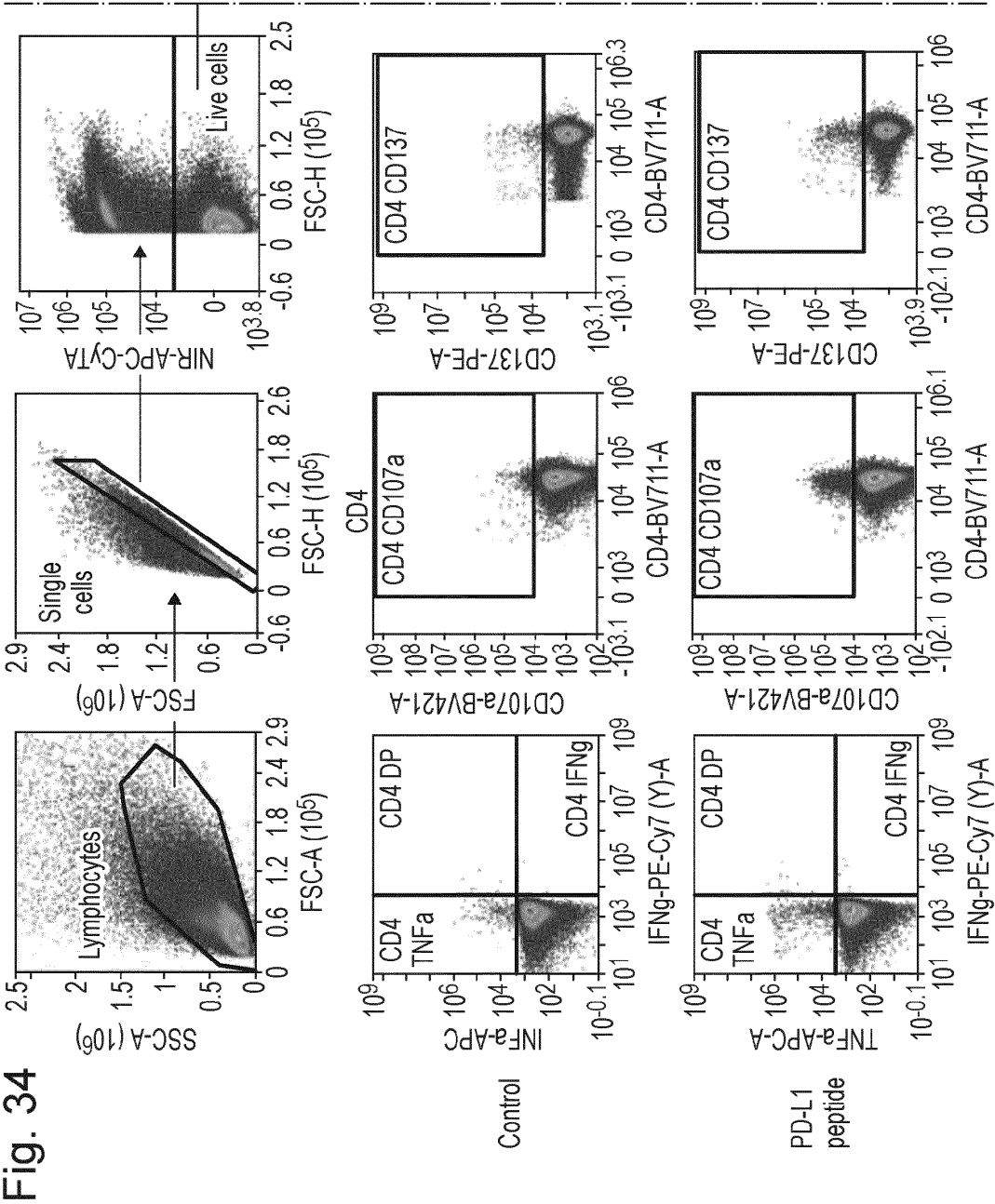


Fig. 34 (Cont.)

