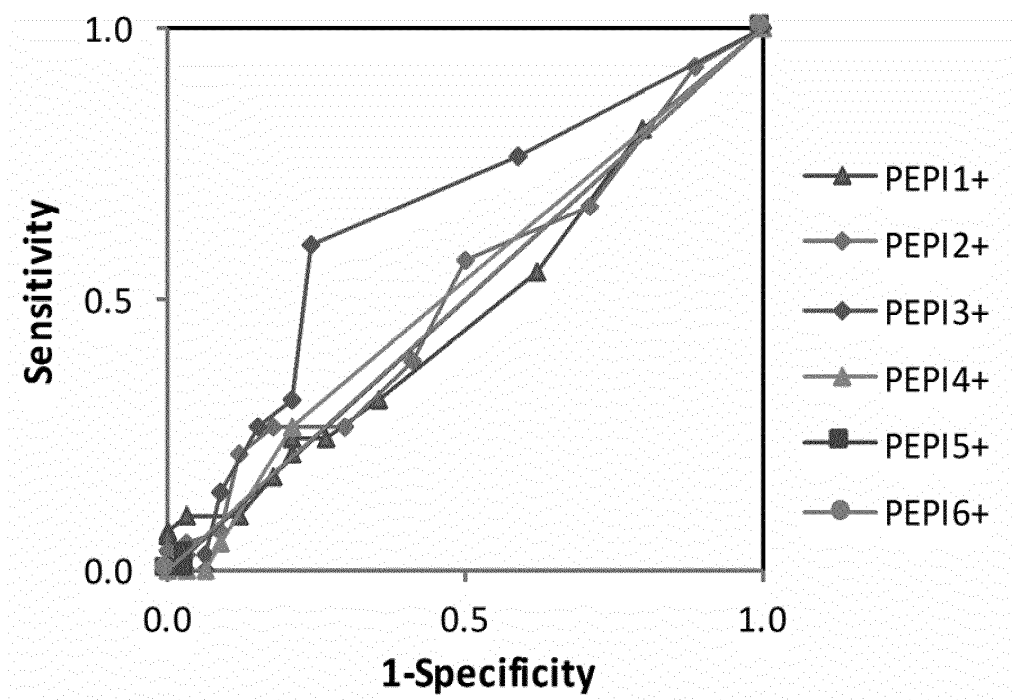
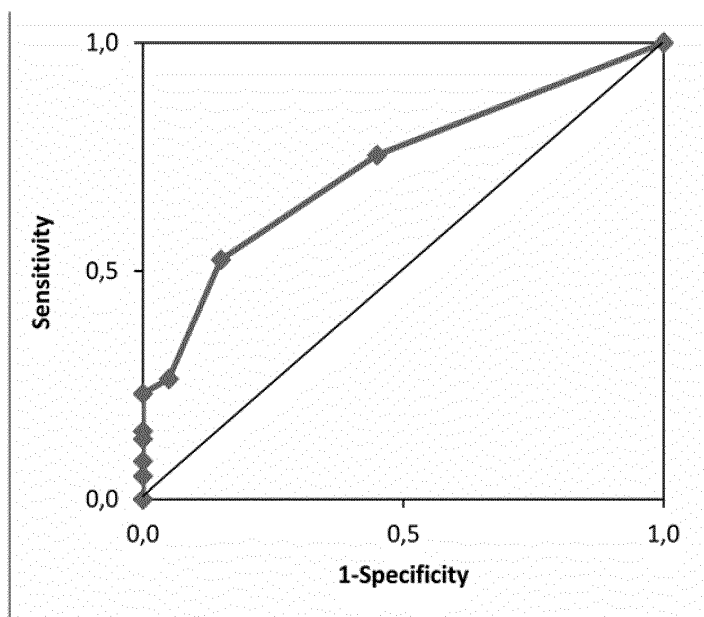


1 /47
Figure 1



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Figure 2



Patient ID	#PEPI / HPV-16 E6 Pools								#PEPI / HPV-16 E7 Pools									
	19-Jan	29-Nov	21-39	31-49	41-59	51-69	61-79	71-89	81-98	19-Jan	29-Nov	21-39	31-49	41-59	51-69	61-79	71-89	81-98
1	TN	TN	TN	FN	TN	FP	TN	TN	FN	FN	TN	TN	TN	FP	TN	TN	TN	TN
2	FN	TN	TN	TN	FP	FP	TN	TN	TN	FN	TN	TN	TN	FP	TN	TN	TN	TN
3	TN	TN	TN	TN	TP	TP	TN	TN	TN	FN	TN	TN	TN	FP	TN	TN	TN	TN
4	TN	FN	TN	TN	FN	FN	TN	TN	TN	TN	TN	TN	TN	TN	TN	TN	TN	TN
6	TN	TN	TN	FN	FP	FP	TN	TN	TN	FN	TN	TN	TN	TN	TN	TN	TN	FP
7	TN	TN	TN	TN	FN	FN	TN	TN	TN	TN	TN	TN	TN	TN	TN	TN	TN	TN
8	FN	FN	TN	FN	TN	TN	FP	FP	FN	FN	TN	TN	TN	TP	TN	TN	TN	TN
9	TN	TN	FN	FN	FN	FN	FP	FP	TN	TN	TN	TN	TN	FP	TN	TN	TN	TN
10	TN	TN	TN	TN	TP	TP	TN	TN	TN	TN	TN	TN	TN	FP	TN	TN	FP	TN
11	FN	FN	TN	TN	TN	TN	TN	TN	TN	TN	TN	TN	TN	TN	TN	TN	TN	TN
13	TN	TN	TN	TN	FN	FN	TN	TN	TN	TN	TN	TN	TN	TN	TN	TN	TN	TN
16	TN	TN	TN	TN	TP	TP	TN	TN	TN	FN	TN	TN	TN	TN	TN	TN	TN	TN
18	TN	TN	TN	TN	FP	FP	TN	TN	TN	FN	TN	TN	TN	TP	TN	TN	TN	TN
22	FN	FN	TN	TN	TP	TP	TN	TN	TN	TN	FP	TN	TN	FP	TN	TN	TN	TN
23	TN	TN	FN	FN	TN	TN	TN	TN	TN	FN	FN	TN	TN	TN	TN	TN	TN	TN
24	TN	TN	TN	FN	TP	TP	TN	TN	TN	FN	FN	TN	TN	FP	TN	TN	FN	FP
27	TN	TN	TN	TN	TN	TN	TN	TN	TN	TN	TN	TN	TN	TN	TN	TN	TN	TN
28	TN	TN	TN	TN	FP	FP	TN	TN	TN	TN	TN	TN	TN	FP	TN	TN	TN	TN
29	FN	FN	TN	TN	TN	TN	TN	TN	TN	FN	FN	TN	TN	TN	TN	TN	TN	TN
30	TN	TN	TN	TN	FP	FP	TN	TN	TN	TN	TN	TN	TN	TN	TN	TN	TN	TN
100	TN	TN	TN	TN	FN	FN	TN	TN	TN	TN	TN	TN	TN	TN	TN	TN	TN	TN
102	TN	TN	TN	TN	TP	TP	TN	TN	TN	TN	TN	TN	TN	TN	FN	TN	TN	TN
103	FN	FN	TN	TN	TN	TN	TN	TN	TN	TN	TN	TN	TN	TN	TN	TN	TN	TN
105	TN	TN	TN	TN	TP	TP	FN	FN	TN	TN	TN	TN	TN	FP	TN	TN	TN	TN
107	TN	TN	TN	TN	TN	TN	TN	TN	TN	FN	FN	TN	TN	TP	TN	TN	TN	TN

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Figure 3B

[illegible]

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Figure 4

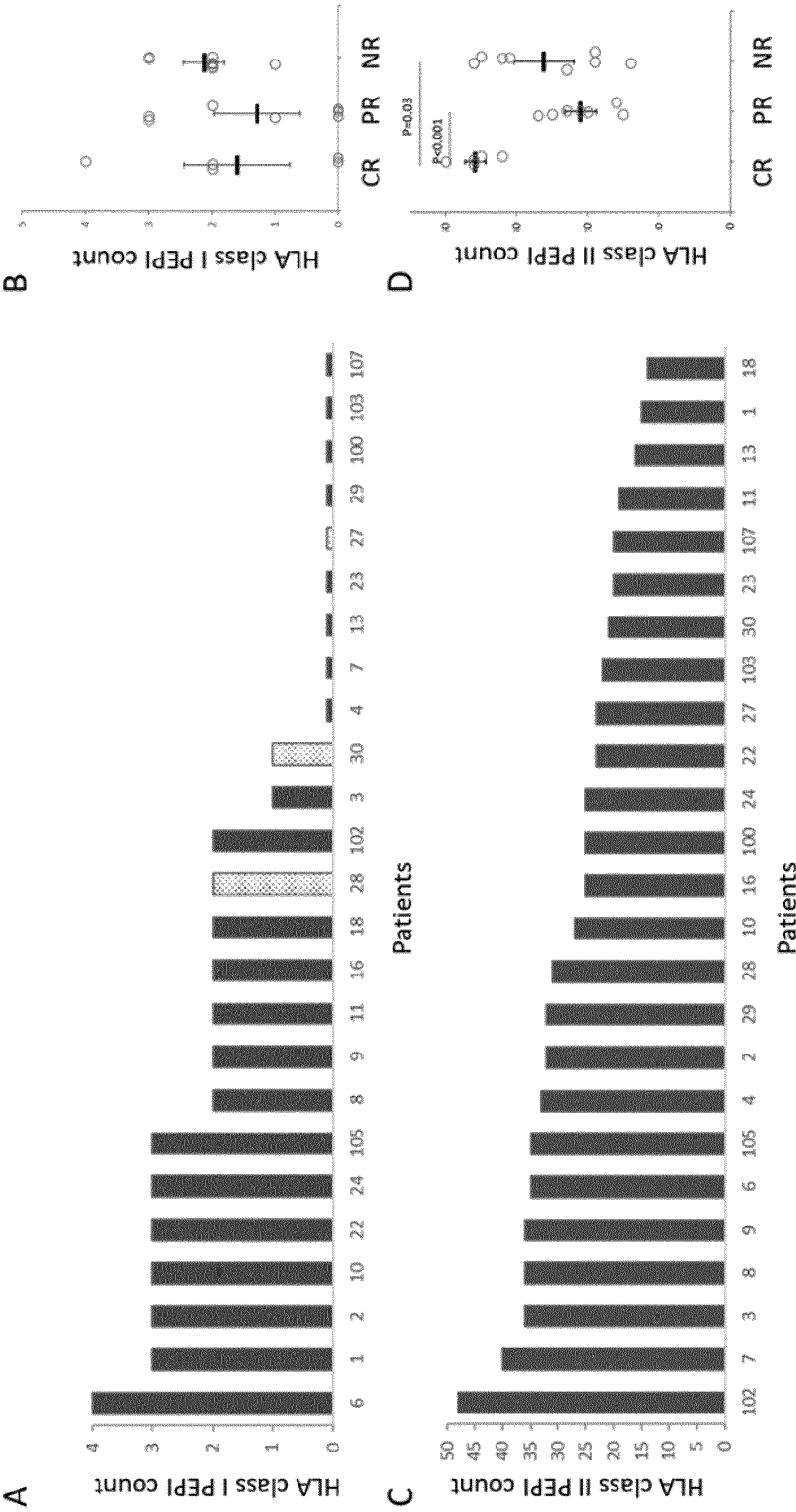
A

Patient ID	#PEPI / HPV-16 E6 & E7 Pools					
	E6.1	E6.2	E6.3	E6.4	E7.1	E7.2
1	FP	TP	TP	FN	TN	FN
2	FP	TP	TP	TN	TN	TP
3	TP	TP	TP	TP	TN	TP
4	TP	TP	TP	TP	FN	FN
6	TP	TP	TP	FN	TP	TP
7	TP	TP	TP	TP	TN	TP
8	TP	TP	TP	FN	FP	TP
9	TP	TP	TP	FN	FP	TP
10	FP	TP	TP	FN	TN	TP
11	TP	TP	FN	FN	FP	TP
13	TP	TP	TP	FN	TN	FN
16	TP	TP	TP	FN	FP	TP
18	FP	TP	TP	FN	FN	TP
22	TP	TP	TP	FN	FN	FN
23	FP	TP	TP	FN	TN	TN
24	FP	TP	TP	FN	TN	TP
27	TP	TP	TP	FN	FN	FN
28	TP	TP	TP	FN	TN	TP
29	FP	TP	TP	FN	FP	TP
30	FP	FP	FP	TN	FN	TP
100	TP	TP	TP	FN	TN	TP
102	TP	TP	TP	FN	TP	TP
103	TP	TP	TP	FN	TN	TN
105	TP	TP	TP	TP	TN	TN
107	TP	TP	FN	FN	FP	TP

B

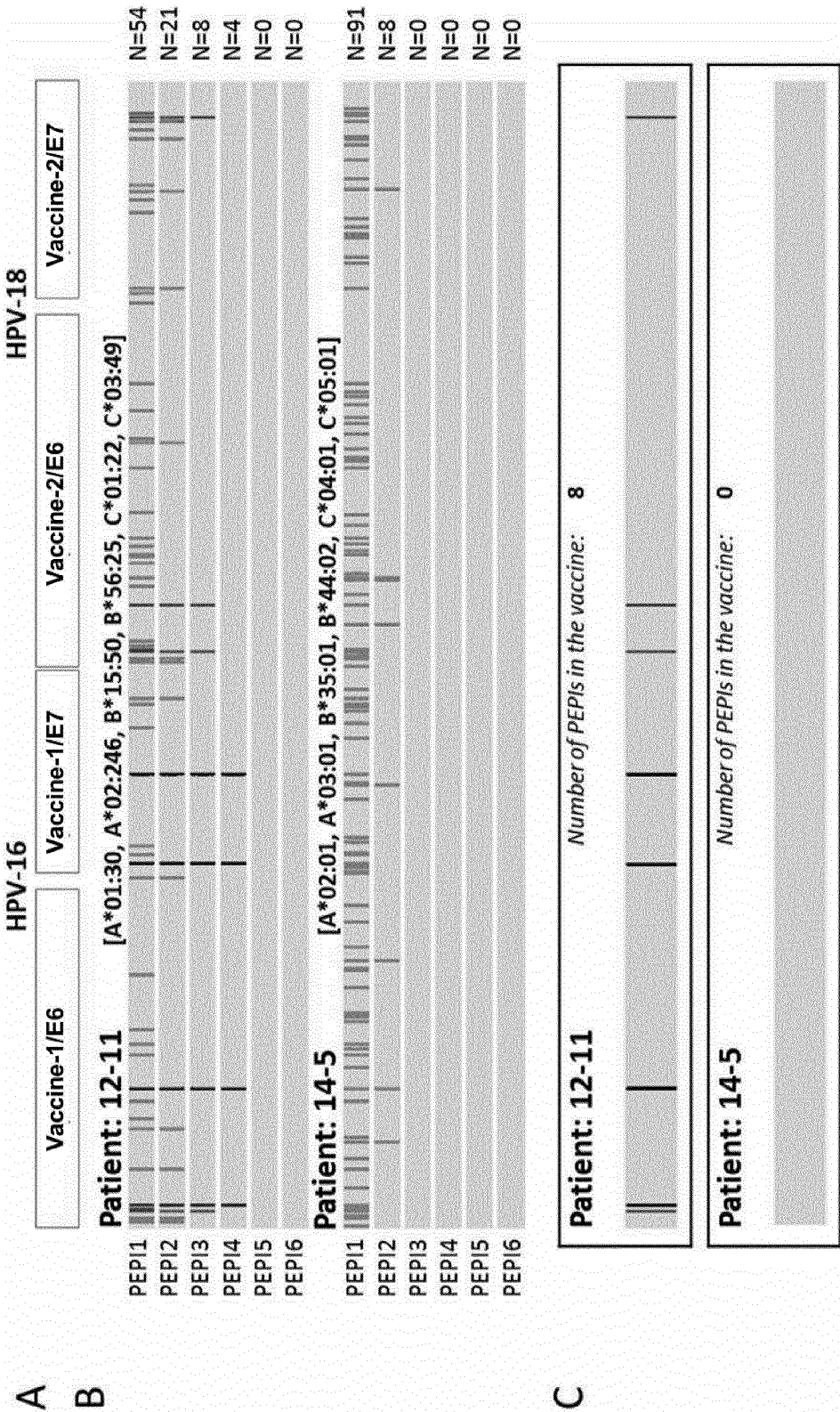
Patient ID	#epitope / HPV-16 E6 & E7 Pools					
	E6.1	E6.2	E6.3	E6.4	E7.1	E7.2
1	FP	TP	TP	TP	FP	TP
2	FP	TP	TP	FP	FP	TP
3	TP	TP	TP	TP	FP	TP
4	TP	TP	TP	TP	FN	TP
6	TP	TP	TP	TP	TP	TP
7	TP	TP	TP	TP	FP	TP
8	TP	TP	TP	FN	FP	TP
9	TP	TP	TP	FN	FP	TP
10	FP	TP	TP	TP	FP	TP
11	TP	TP	TP	TP	FP	TP
13	TP	TP	TP	TP	FP	TP
16	TP	TP	TP	FN	FP	TP
18	FP	TP	TP	FN	TP	TP
22	TP	TP	TP	TP	TP	TP
23	FP	TP	TP	TP	FP	FP
24	FP	TP	TP	TP	FP	TP
27	TP	TP	TP	TP	TP	TP
28	TP	TP	TP	TP	FP	TP
29	FP	TP	TP	TP	FP	TP
30	FP	FP	FP	FP	TP	TP
100	TP	TP	TP	TP	FP	TP
102	TP	TP	TP	TP	TP	TP
103	TP	TP	TP	TP	FP	FP
105	TP	TP	TP	TP	FP	FP
107	TP	TP	TP	TP	FP	TP

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Figure 5

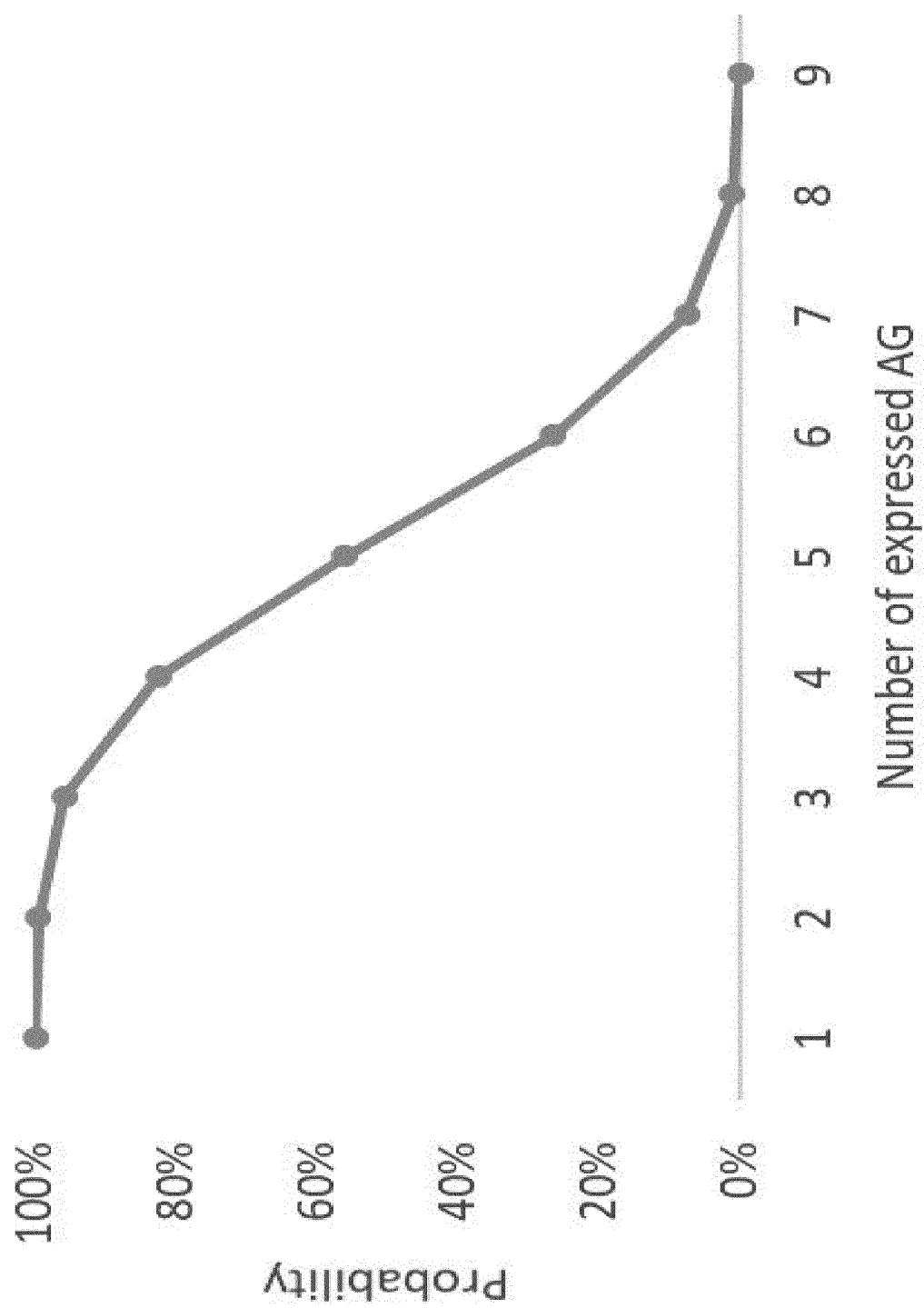


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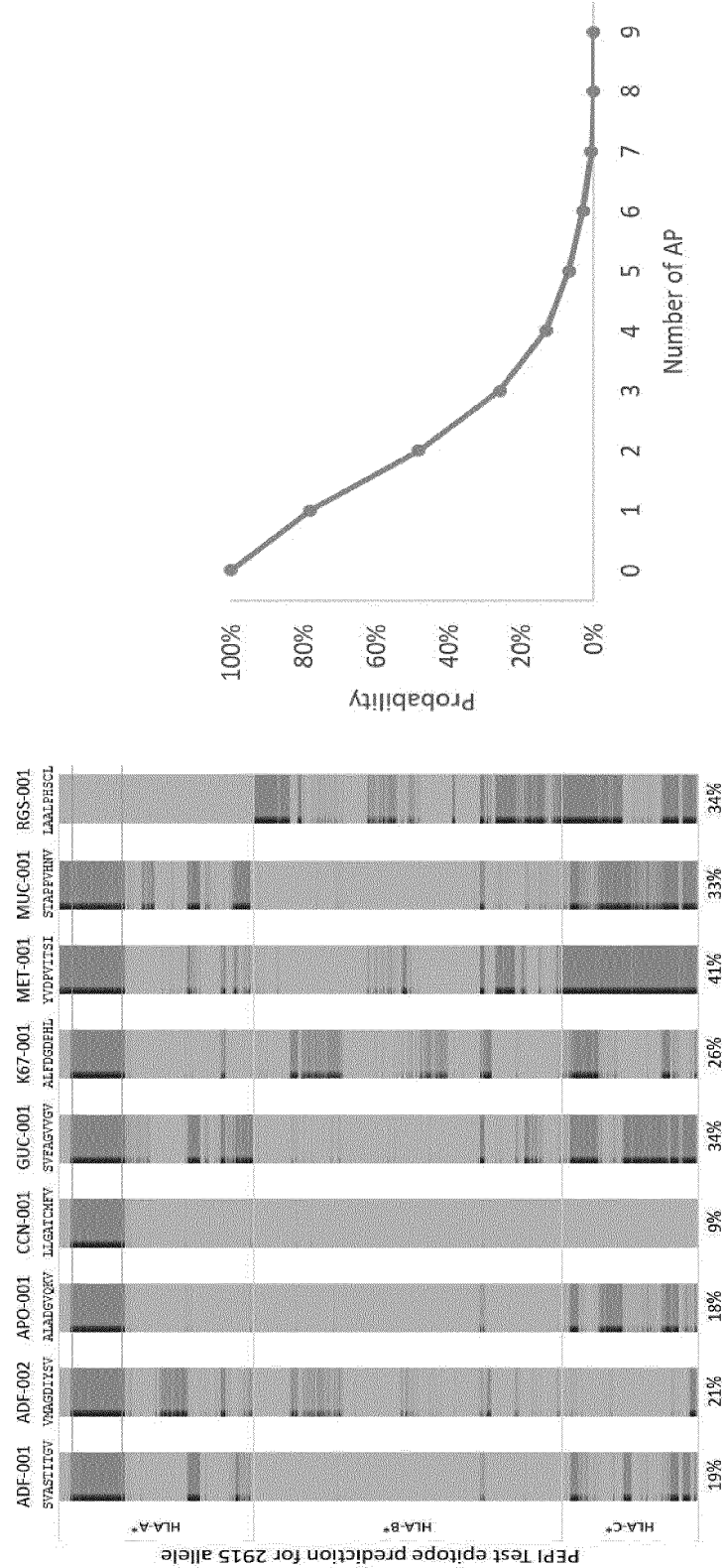
Figure 6



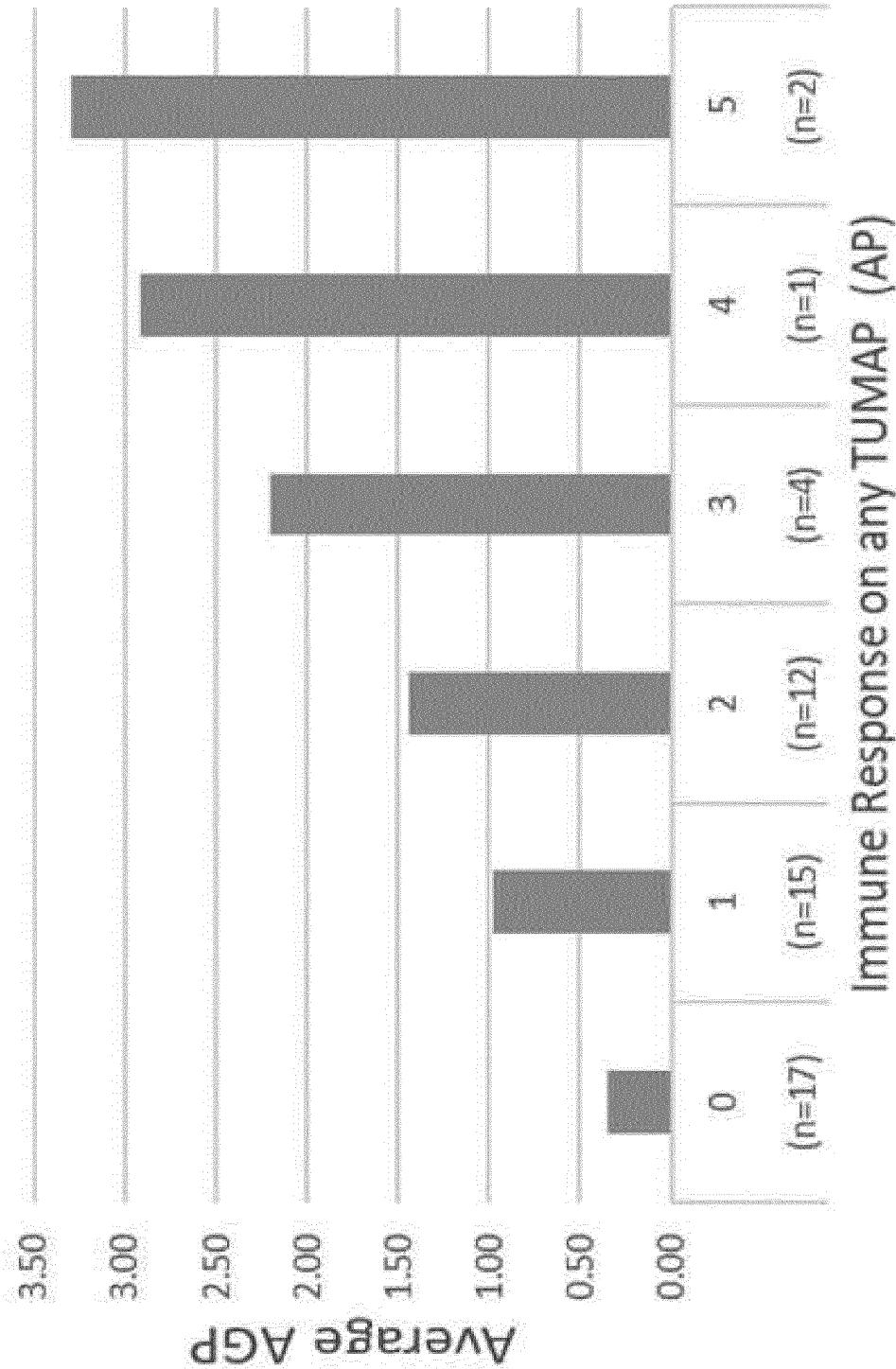
8 /47
Figure 7



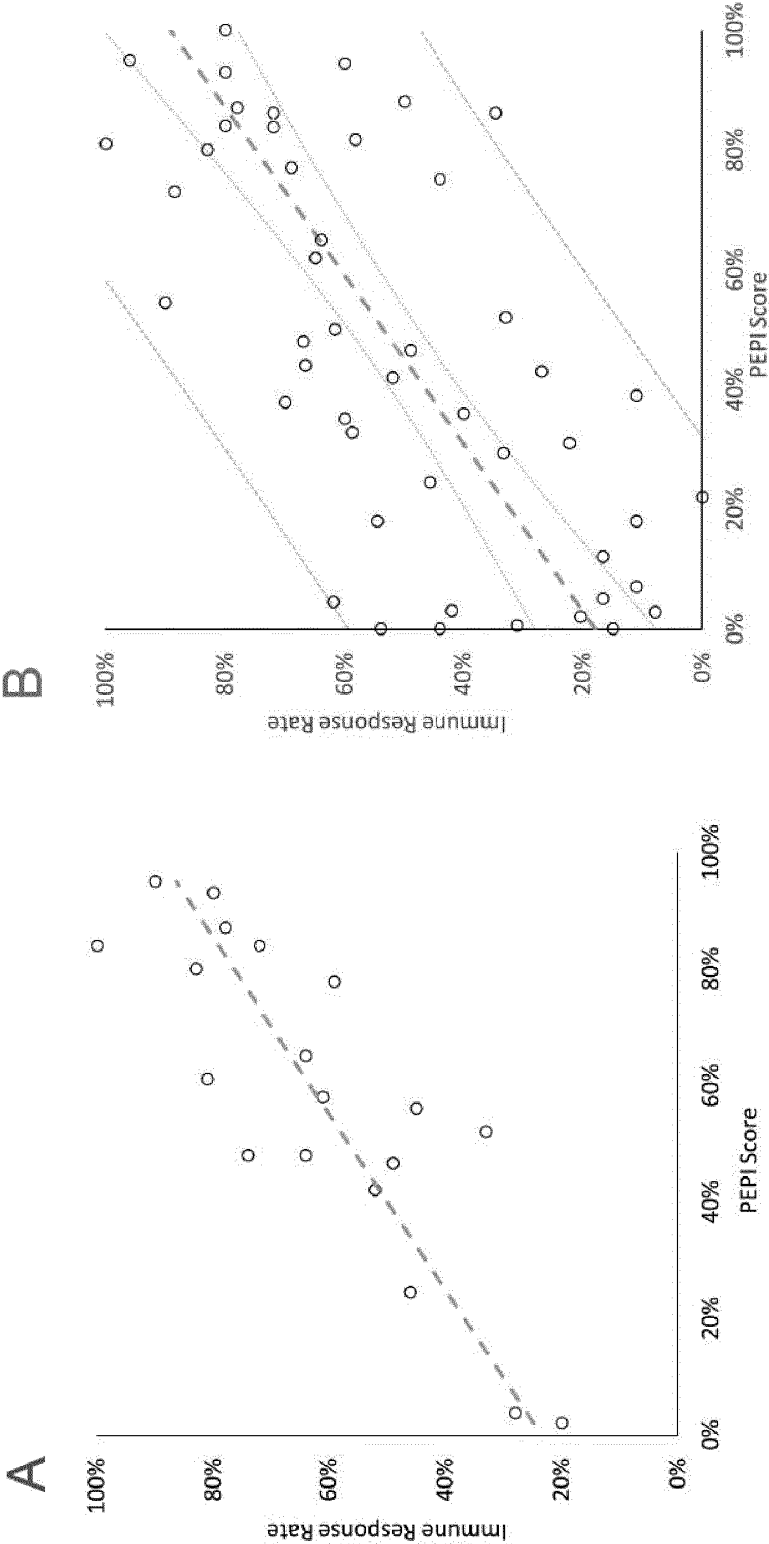
9 /47
Figure 8



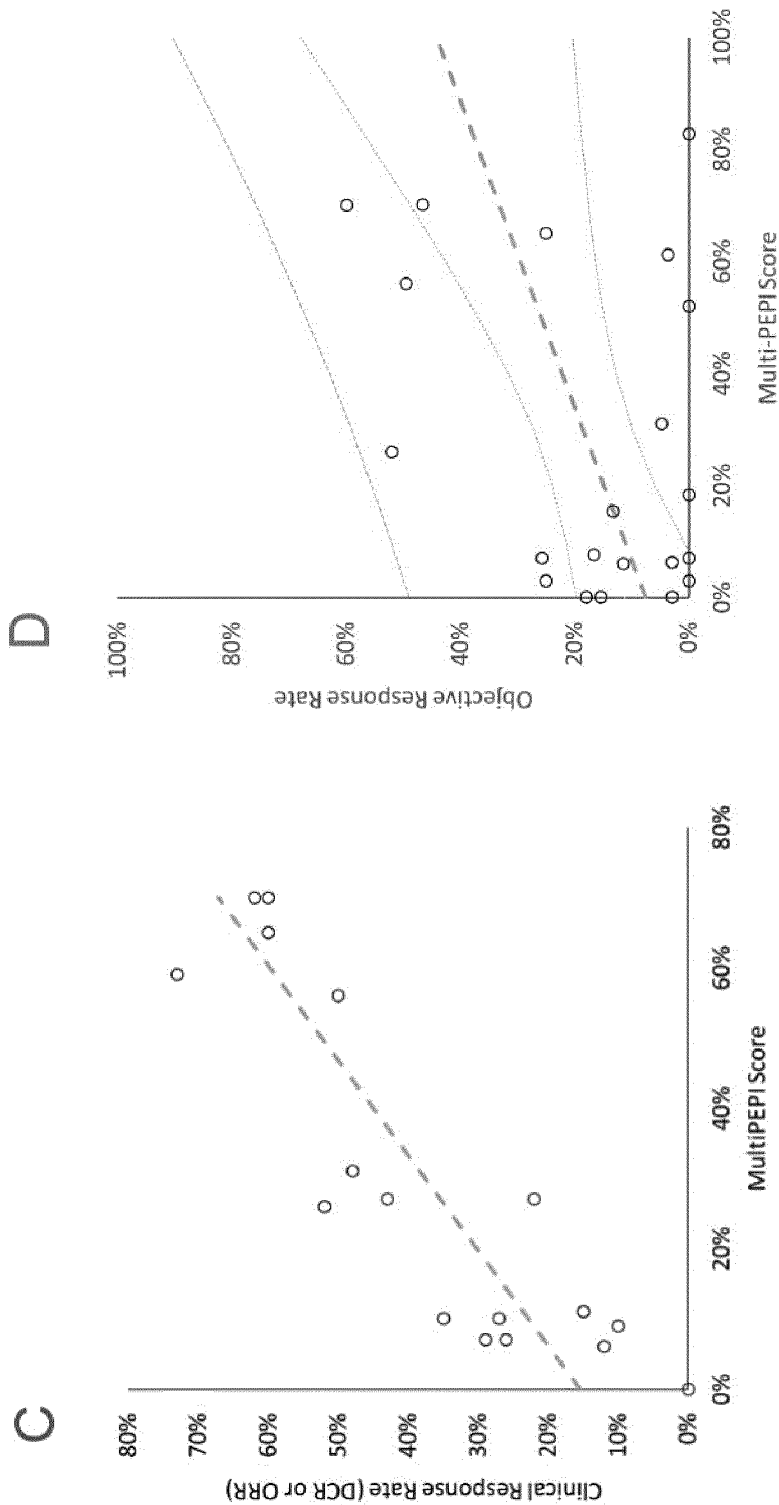
10 /47
Figure 9



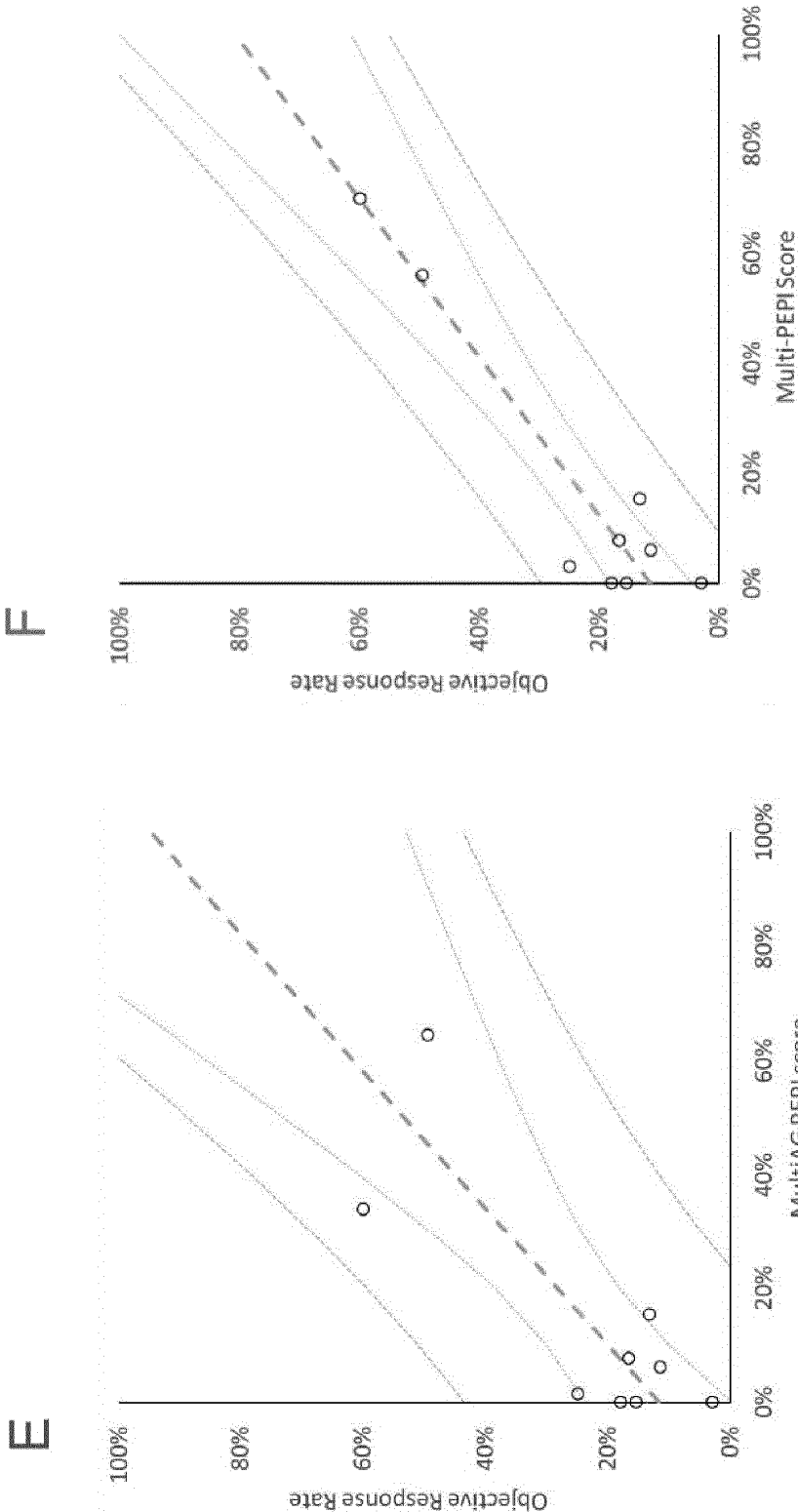
11 /47
Figure 10



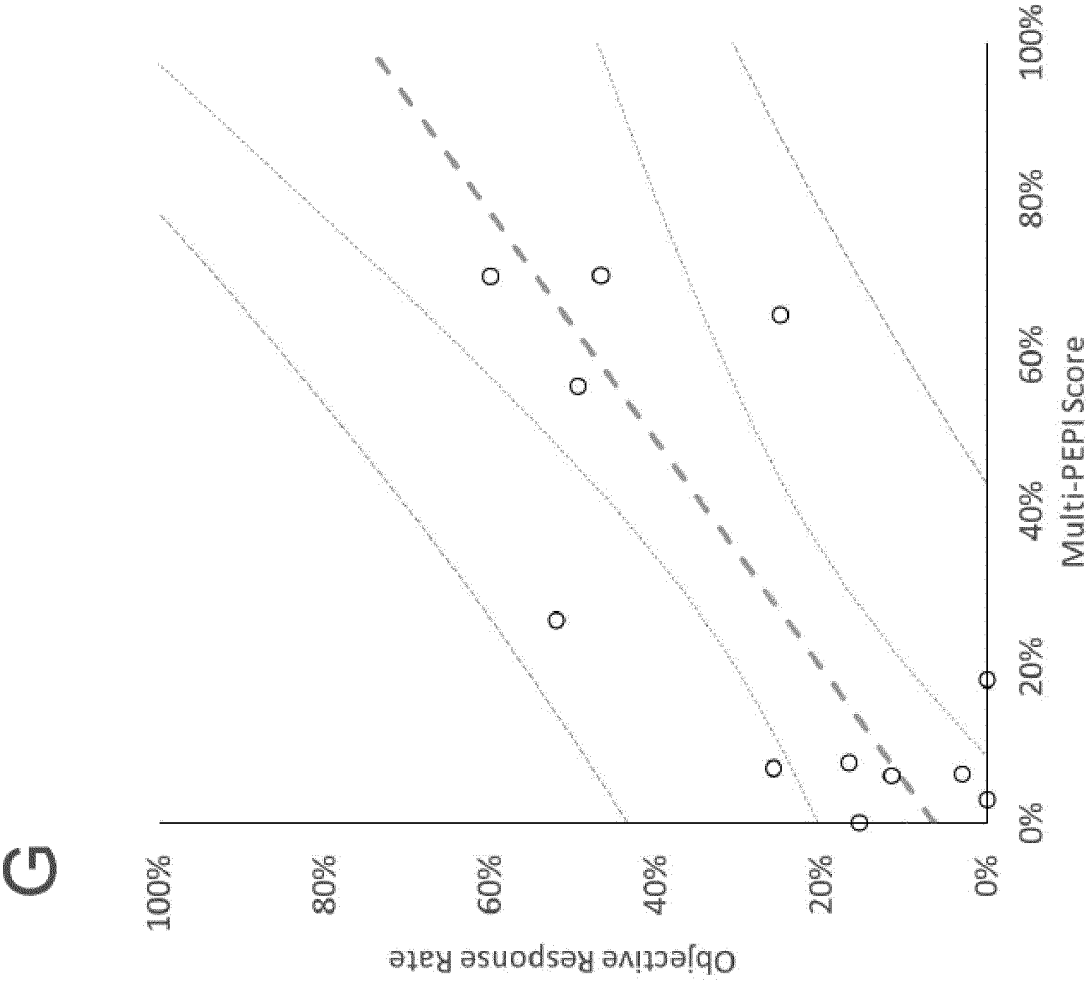
12 /47
Figure 10



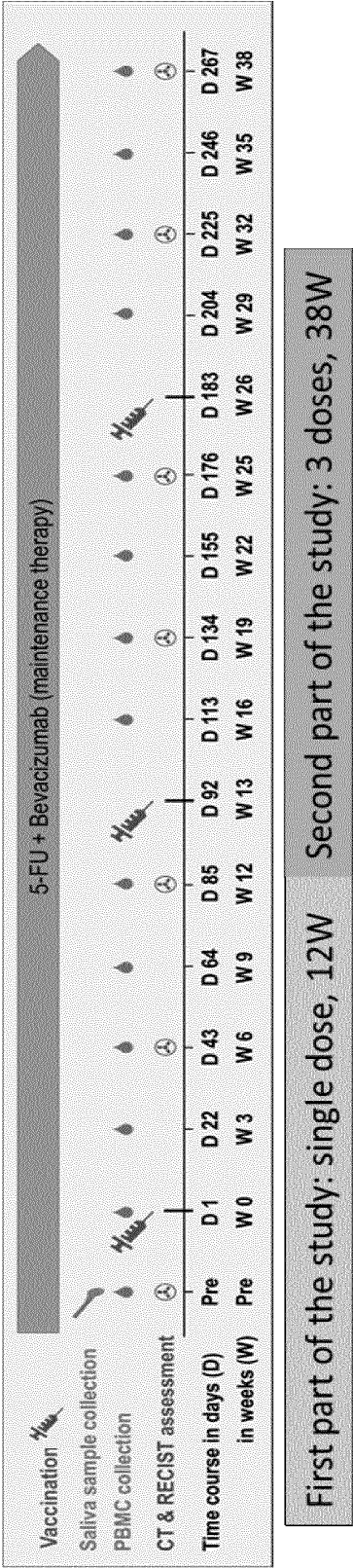
13 /47
Figure 10



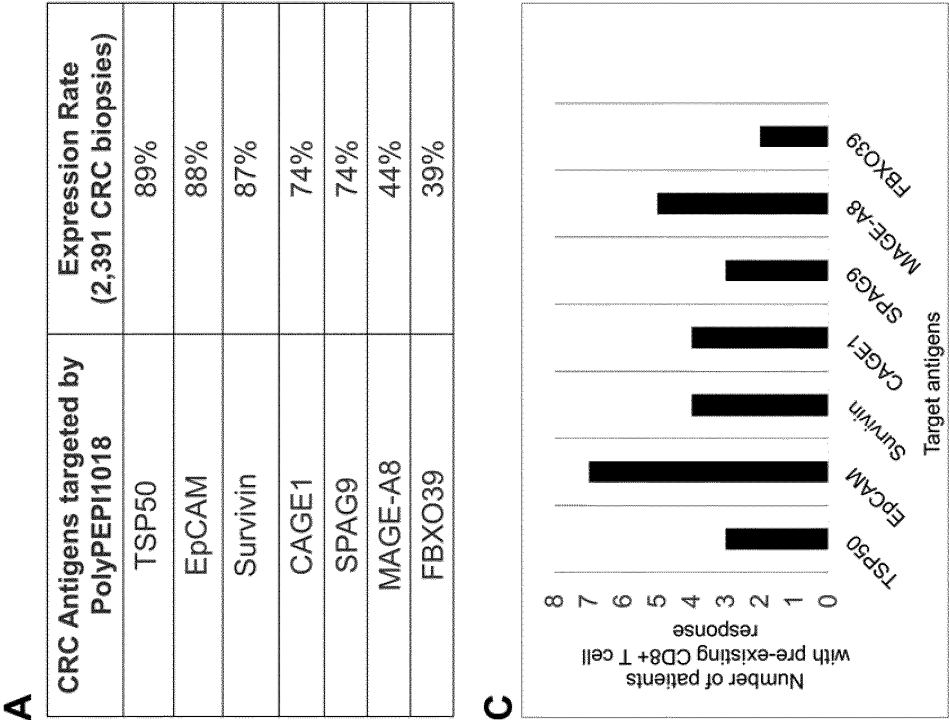
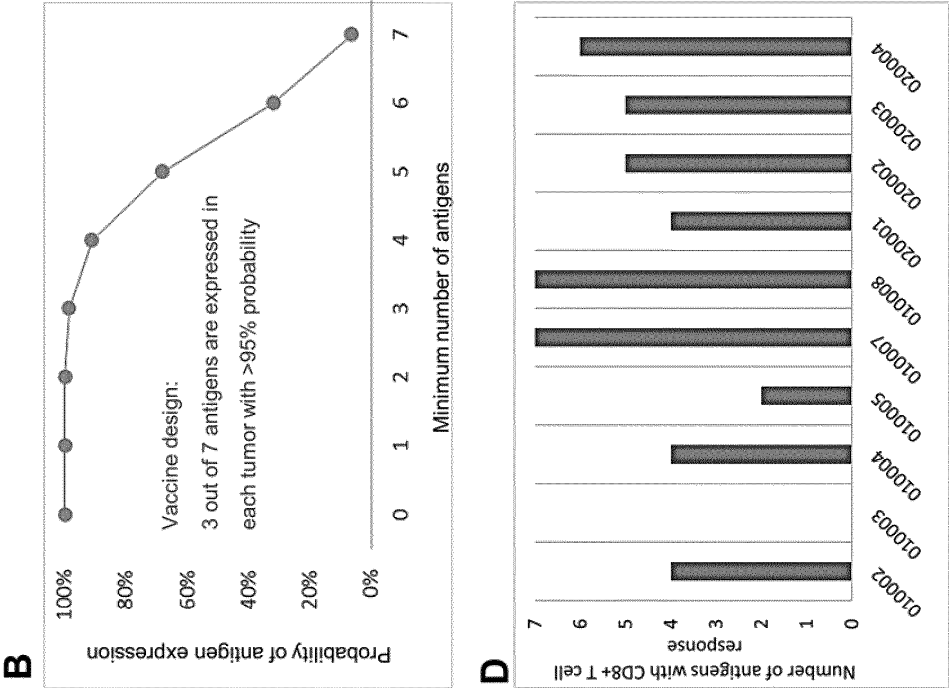
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Figure 10



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Figure 11



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Figure 12



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Figure 13

CRC_P3 peptide (30 aa)

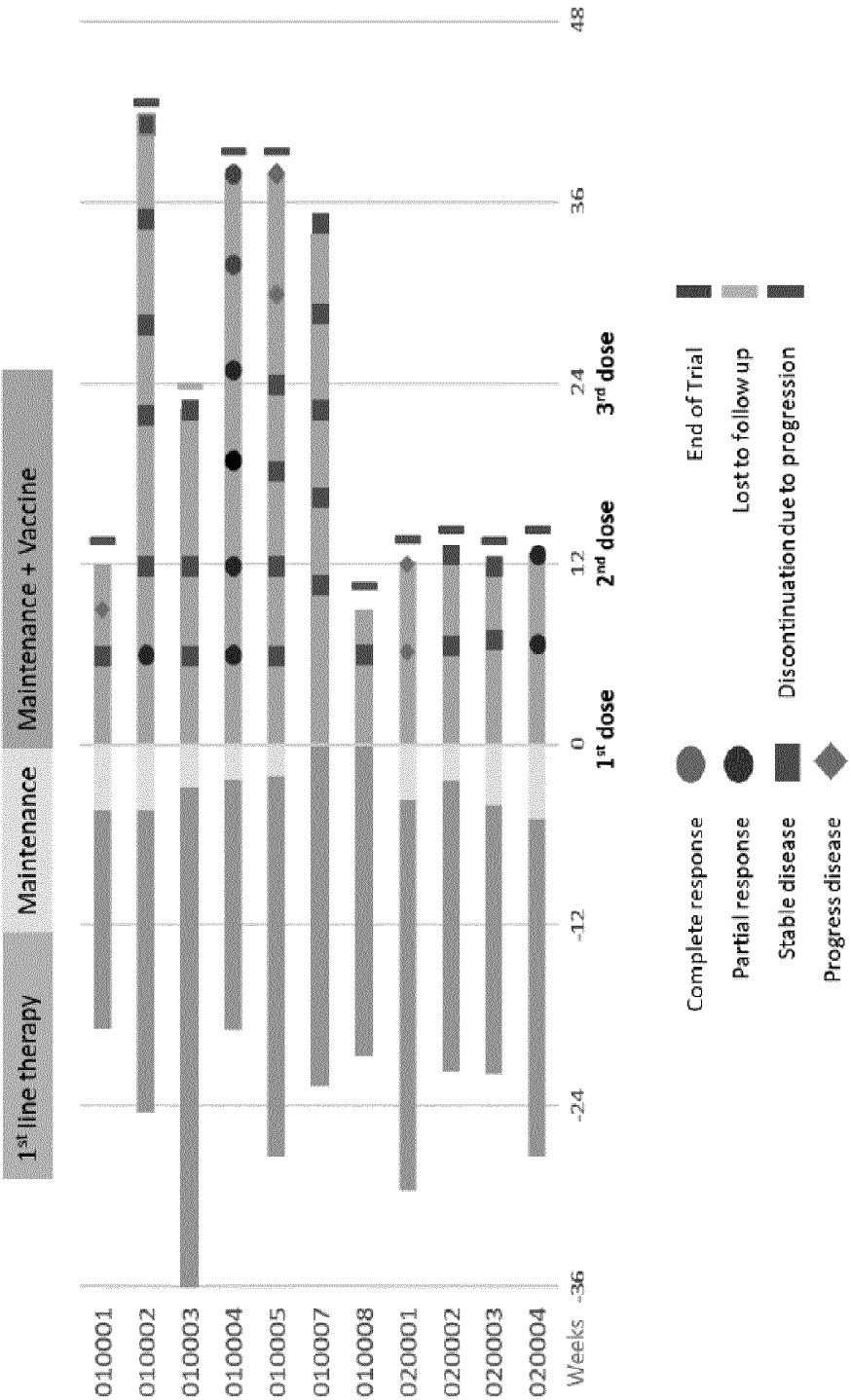
EpCam (15 aa) MAGE-A8 (15 aa)

YVDEKAPFEFSMQGLK DEKVAELVRFLRK

PolyPEP1018 vaccine antigens	Pre-clinical Immunogenicity		Clinical Immunogenicity
	Model population (n=433)	CRC cohort (n=37)	
TSP50	53%	62%	70%
EpCAM	69%	41%	90%
Survivin	36%	32%	70%
Cage	68%	81%	50%
SPAG9	28%	3%	40%
FBXO39	90%	100%	60%
MAGE-A8	18%	0%	60%
Any antigen	98%	100%	90%
Any 2 antigens	92%	92%	90%
Any 3 antigens	72%	65%	80%

**Lorincz et al. Journal of Clinical Oncology 37, 2019 (suppl; abstr e14298).*

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Figure 14A



Note: In the CAIRO3 trial the PFS1 was m8.5 month (95% CI 6.5-10.3)*

*CAIRO3 trial: Simkens et al. The Lancet 2015

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Figure 14B

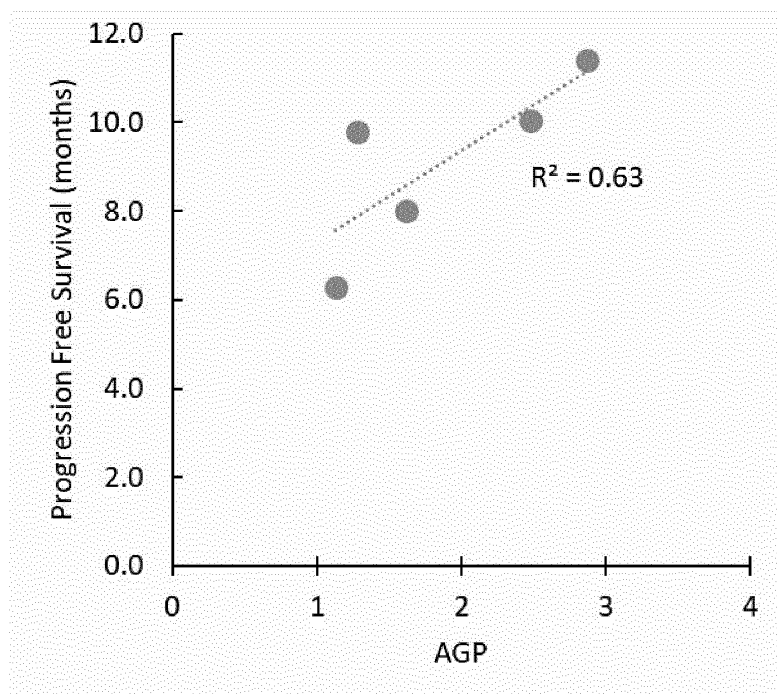
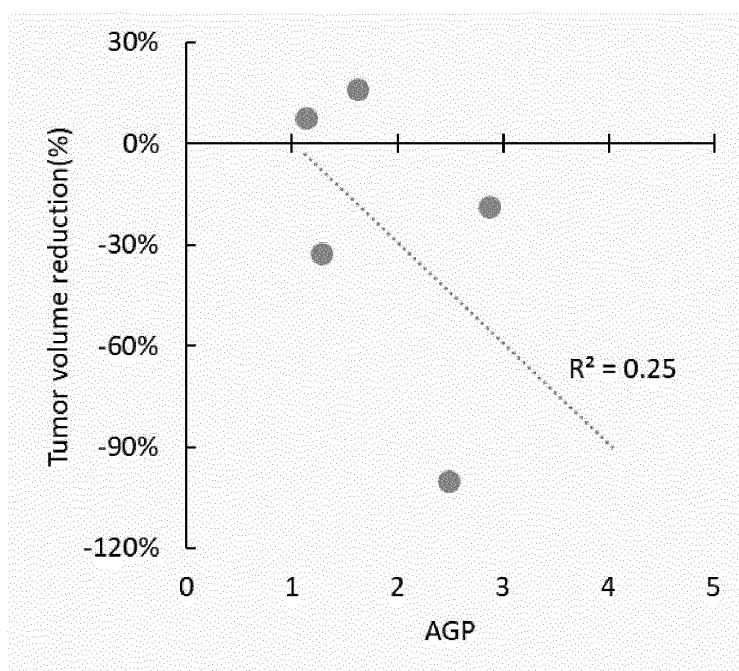
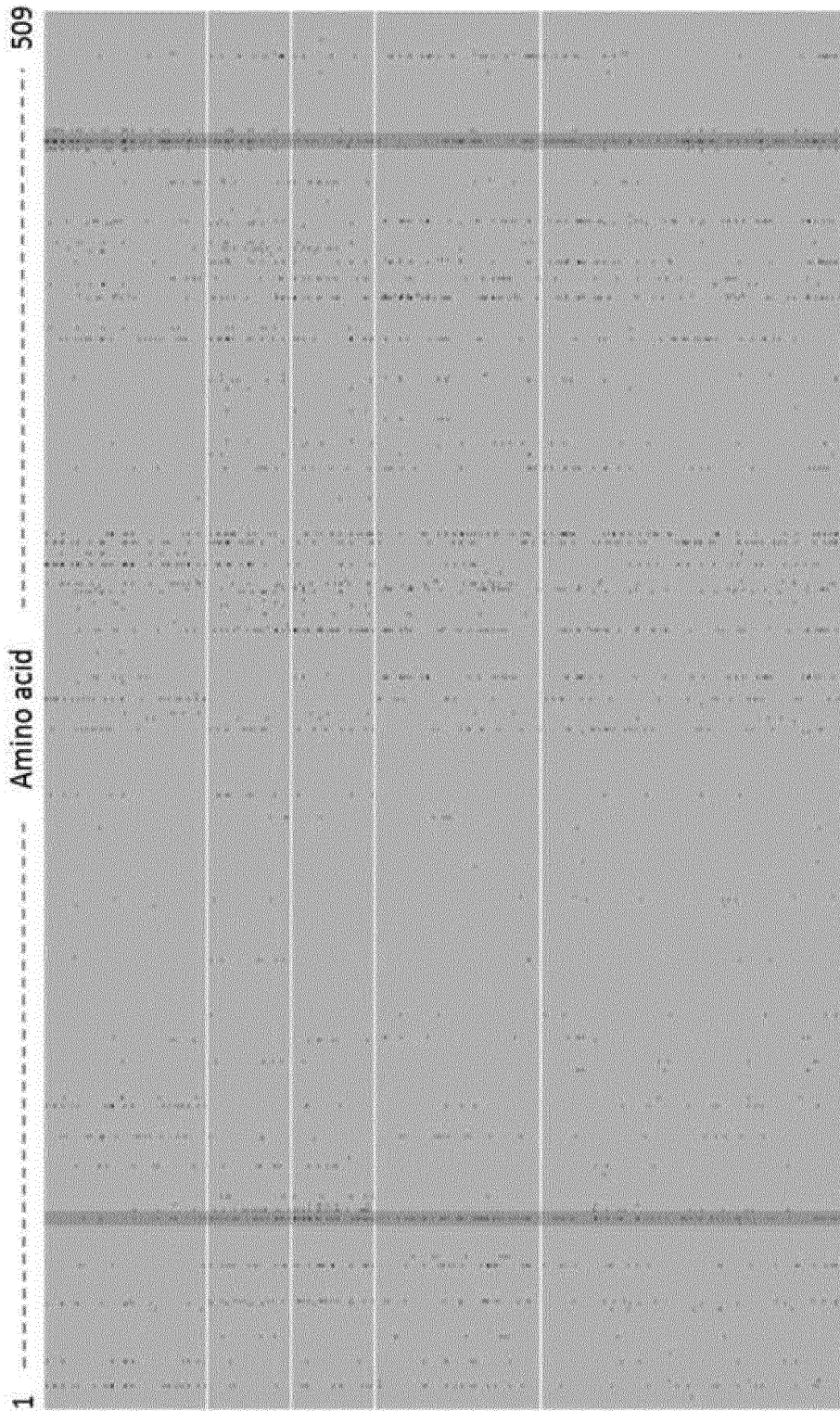


Figure 14C



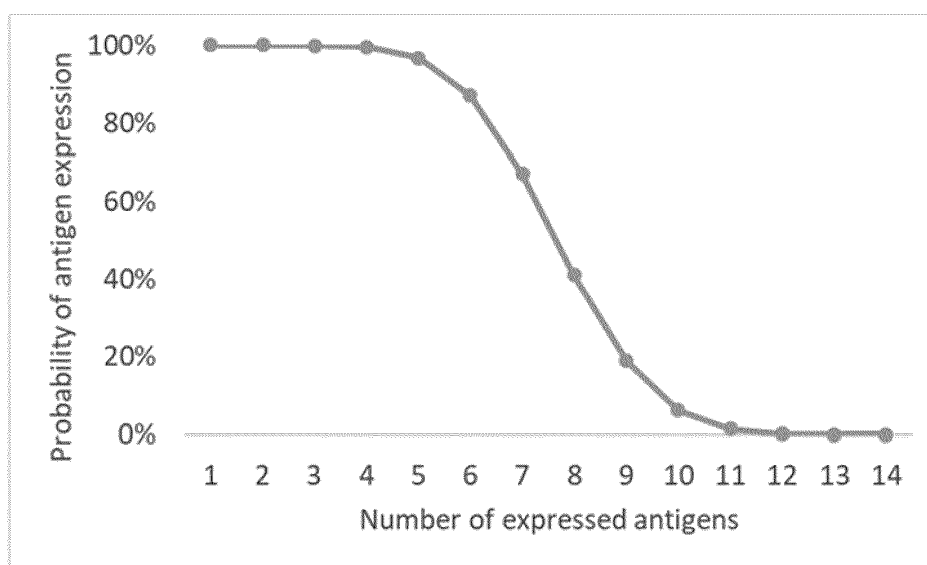
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Figure 15



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Figure 16

Antigen	Expression level
SURVIVIN	100%
DPPA2	100%
KK-LC-1	80%
CAGE-1	77%
HIWI	76%
TSP50	57%
5T4	52%
MAGE-A3	37%
MAGE-A1	31%
MAGE-A2	31%
MAGE-A10	30%
PRAME	20%
LAGE-1	14%
SSX1	13%

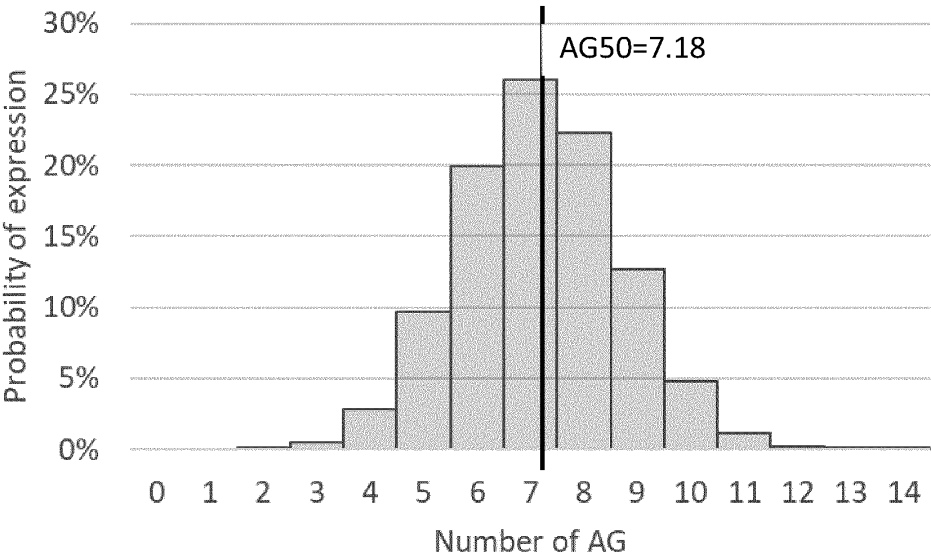


Conclusion:

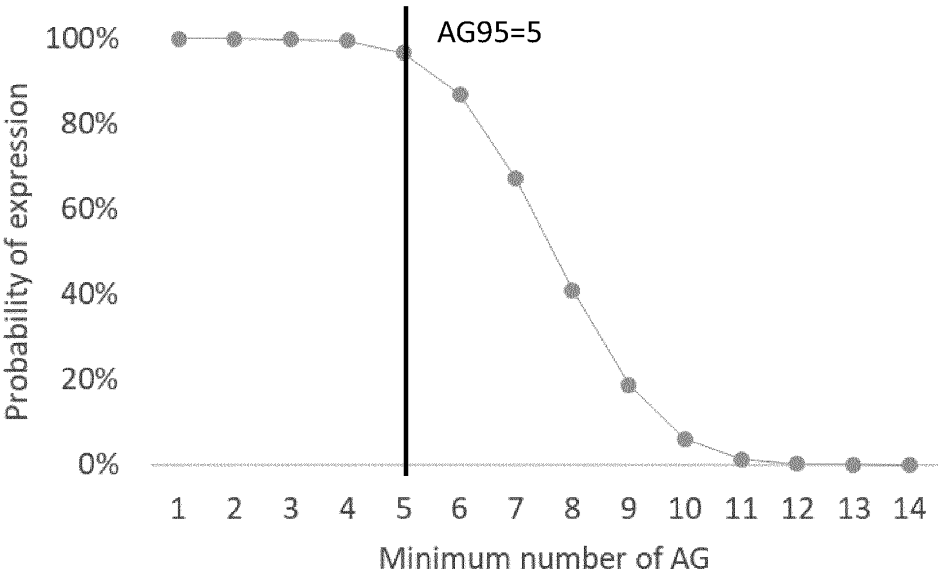
1. 99% of the tumor express ≥ 3 antigens
2. No biopsy is needed

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Figure 17

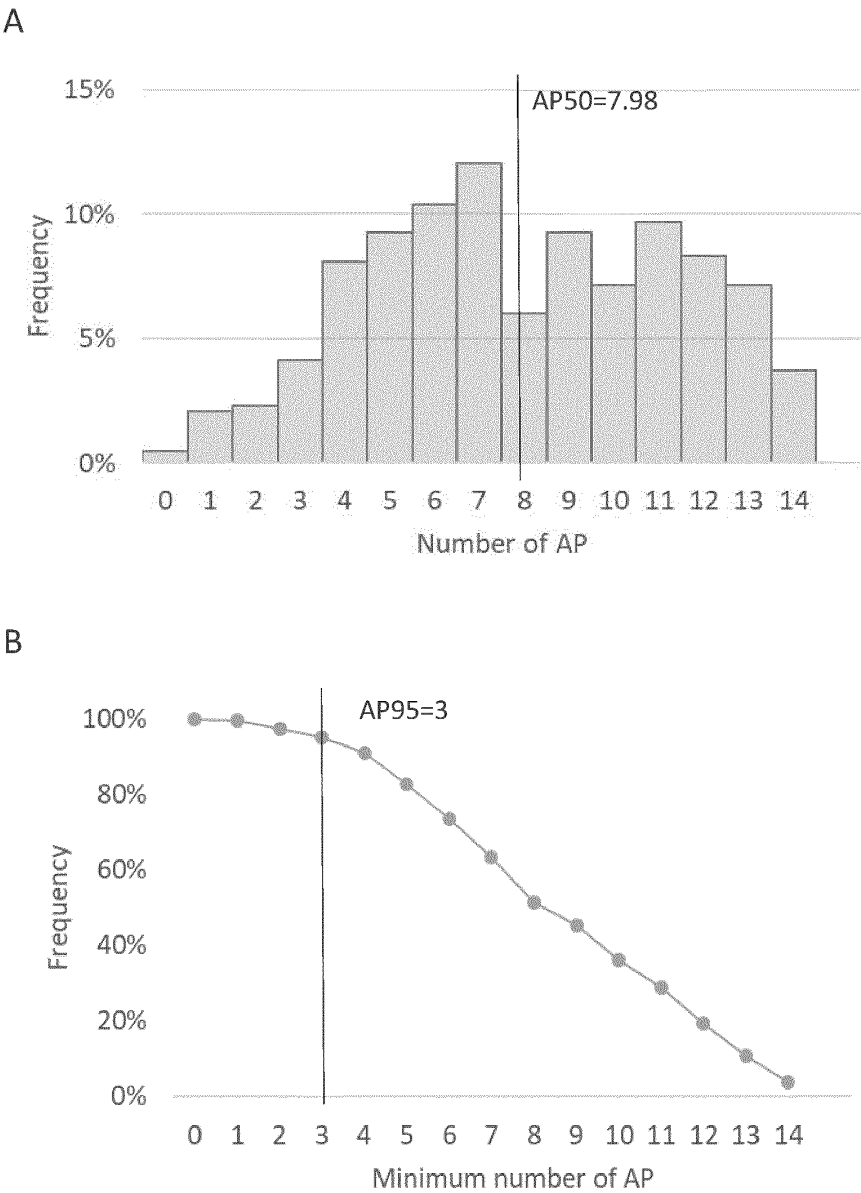
A



B



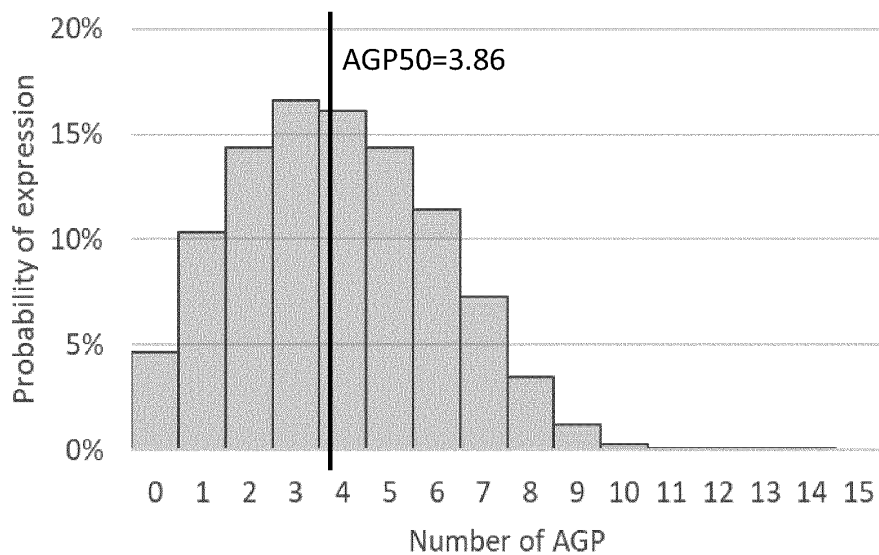
23/47
Figure 18



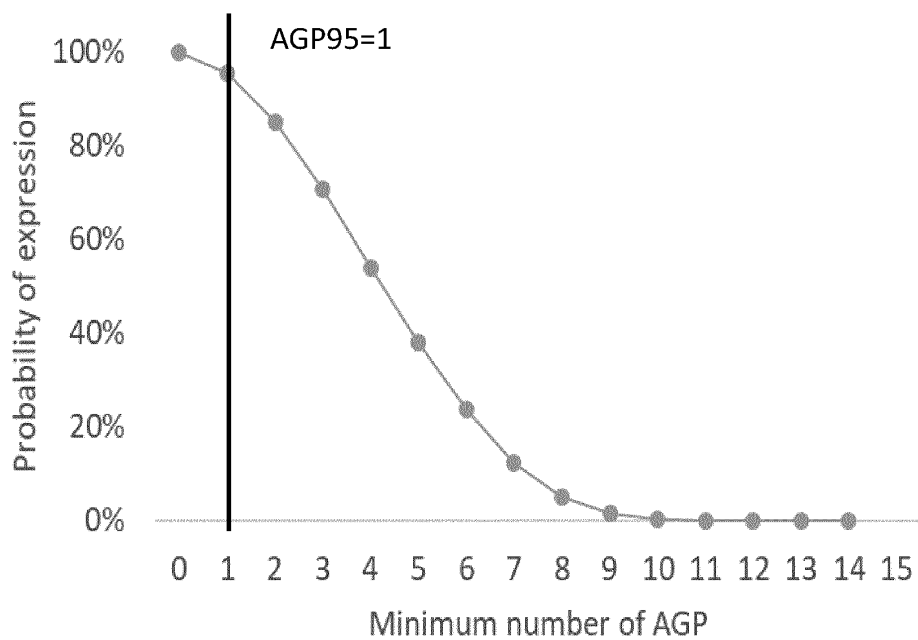
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Figure 19

A



B



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Figure 20

Antigen	Expression level
BRDT	48%
PRAME	63%
NALP4	38%
MAGE-C2	24%
MAGE-A12	36%
NY-SAR-35	28%
DPPA2	30%
KK-LC-1	35%
SURVIVIN	57%
MAGE-A2	27%
LDHC	29%
MAGE-A3	33%
MAGE-A1	28%

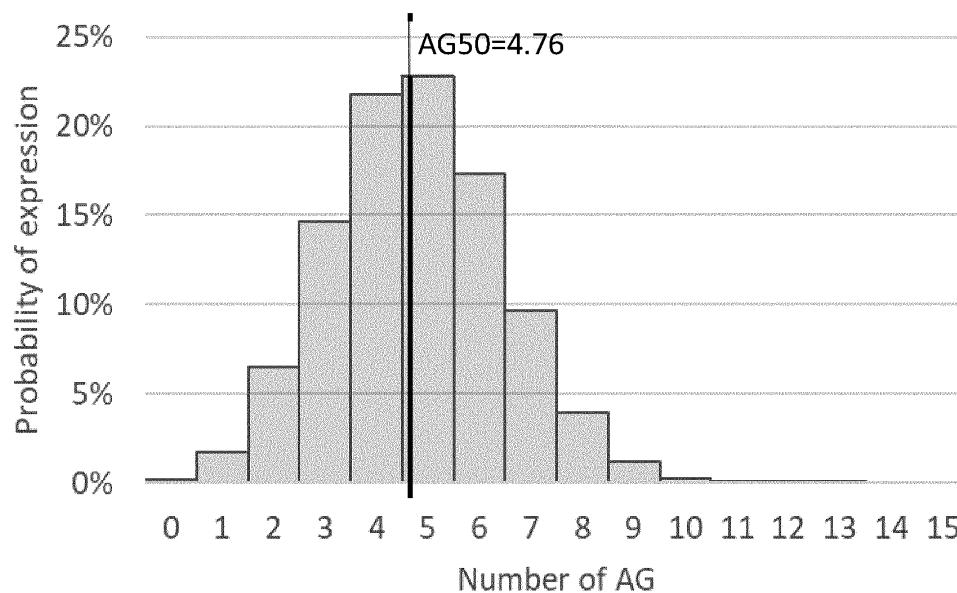
**Conclusion:**

1. 99% of the tumor express ≥ 3 antigens
2. No biopsy is needed

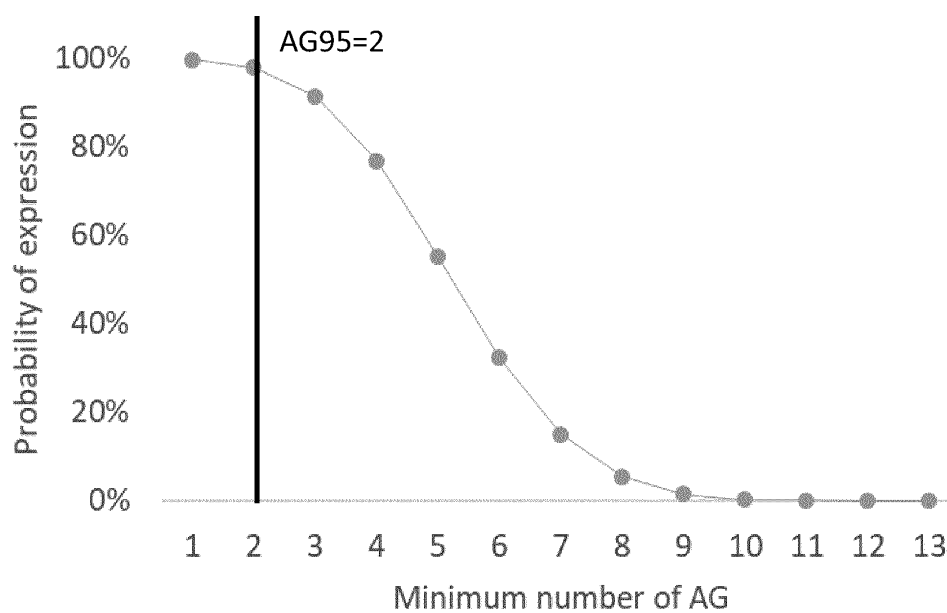
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Figure 21

A



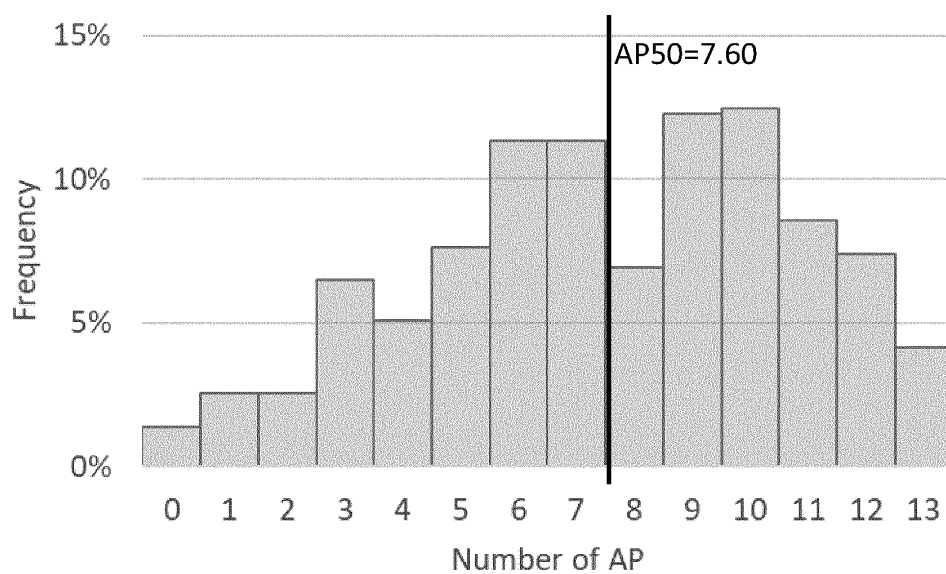
B



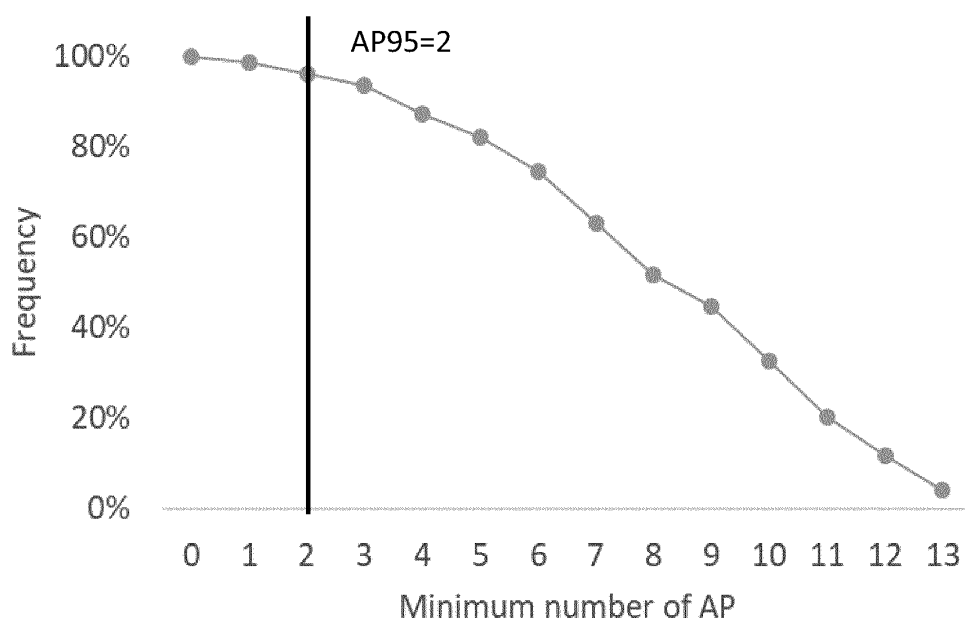
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Figure 22

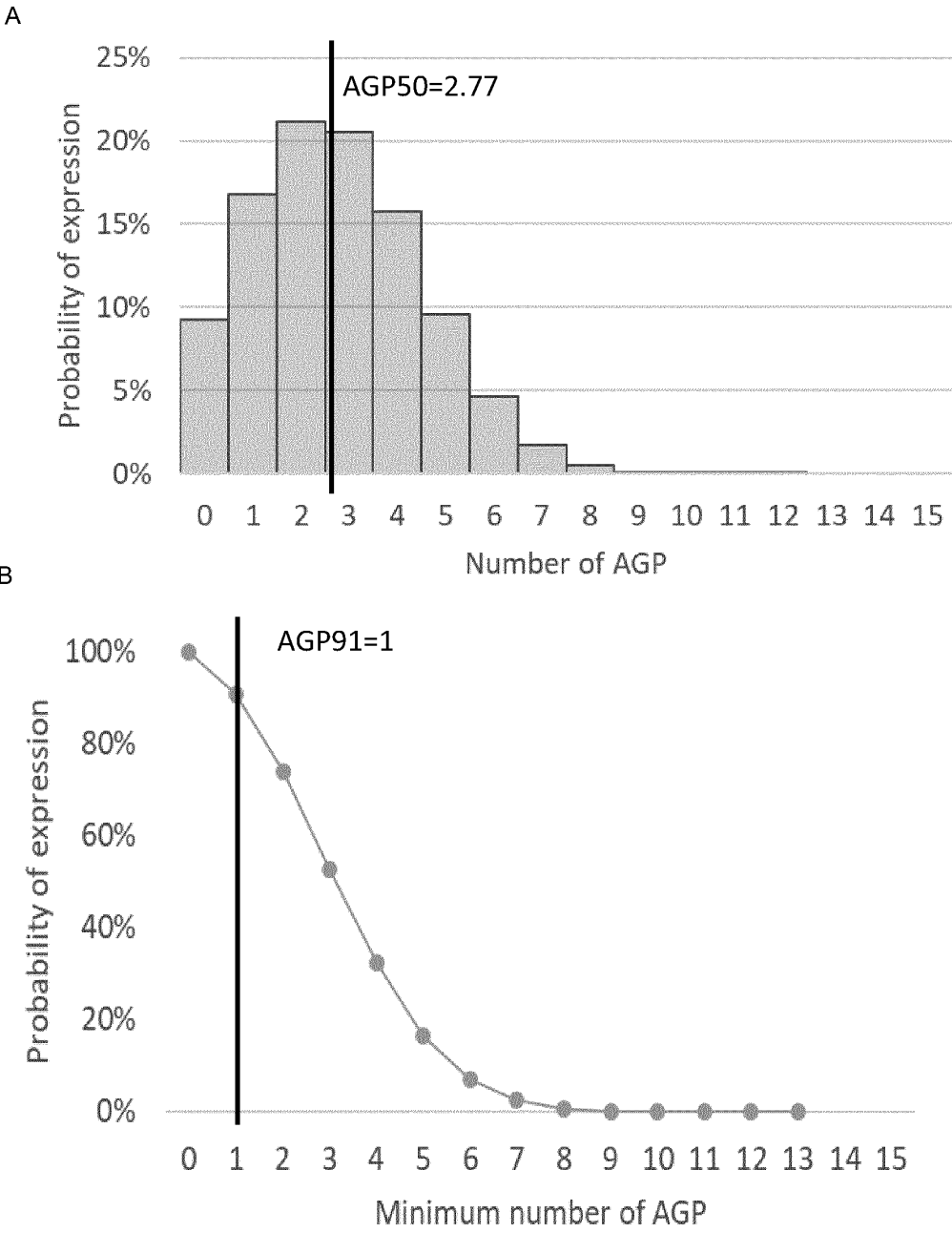
A



B



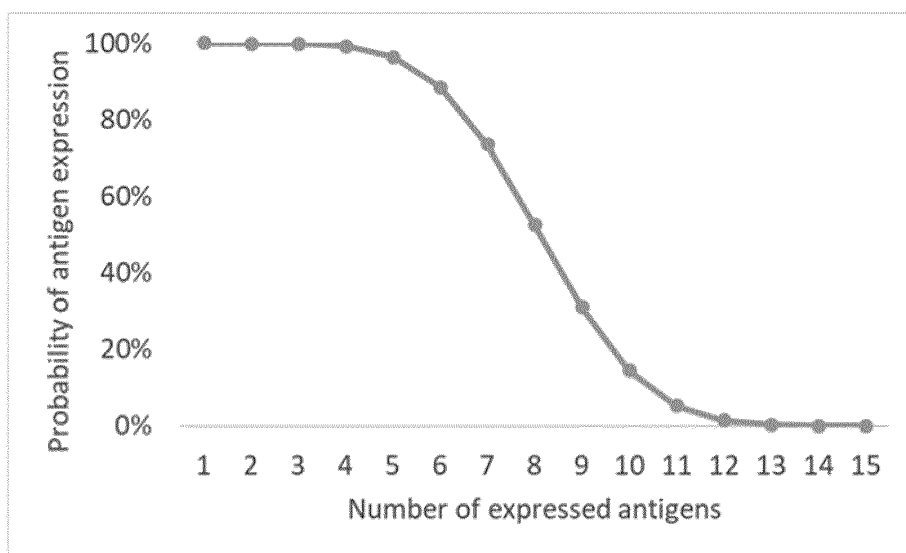
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Figure 23



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Figure 24

Antigen	Expression level
Survivin	96%
PRAME	90%
MAGE-A6	62%
MAGE-A2	61%
MAGE-A3	59%
MAGE-A11	54%
MAGE-A12	45%
MAGE-C1	45%
MAGE-C2	45%
MAGE-A10	44%
Ny-ESO-1	38%
MAGE-A1	37%
LAGE-1	35%
BORIS	27%
SSX-1	25%



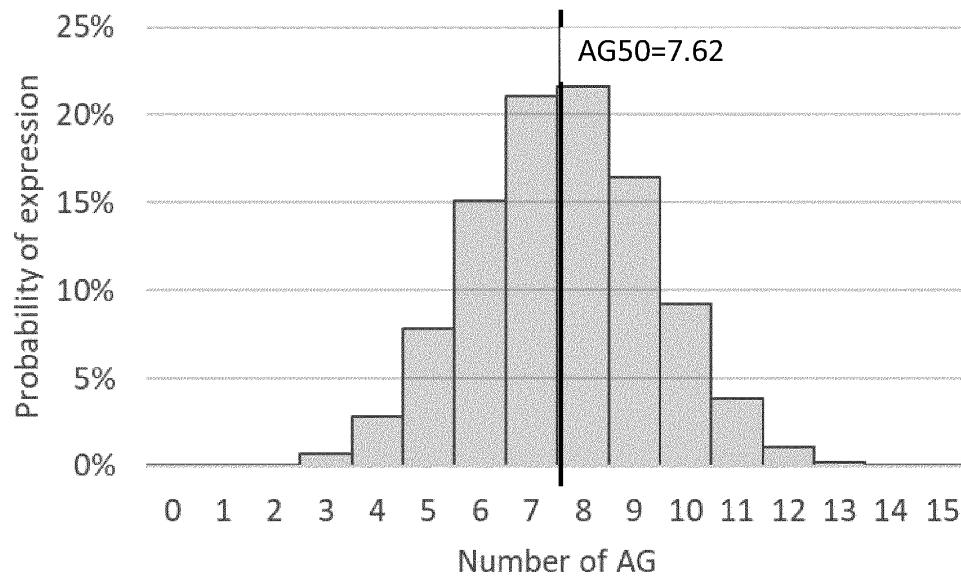
Conclusion:

1. 99% of the tumor express ≥ 3 antigens
2. No biopsy is needed

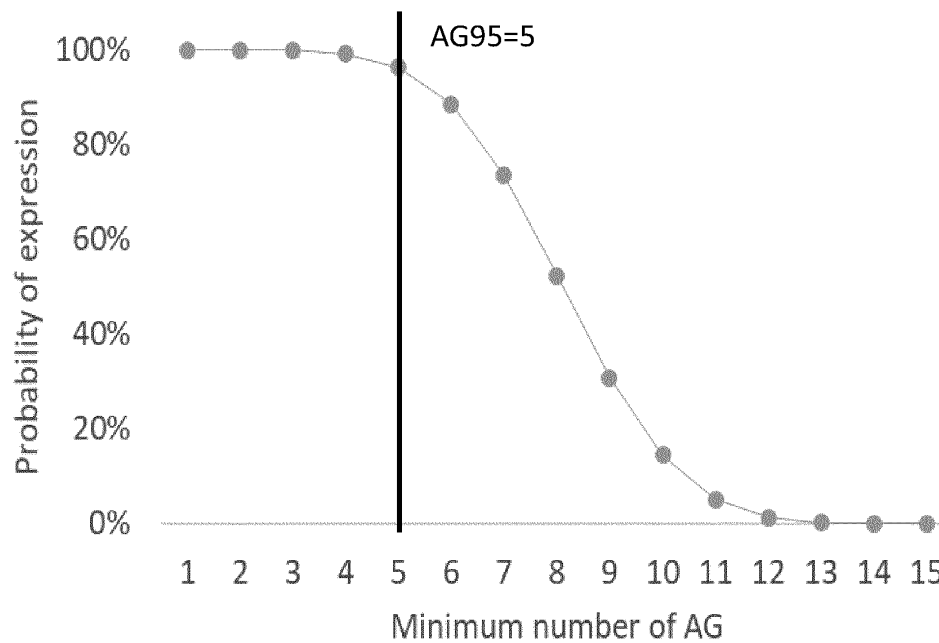
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Figure 25

A



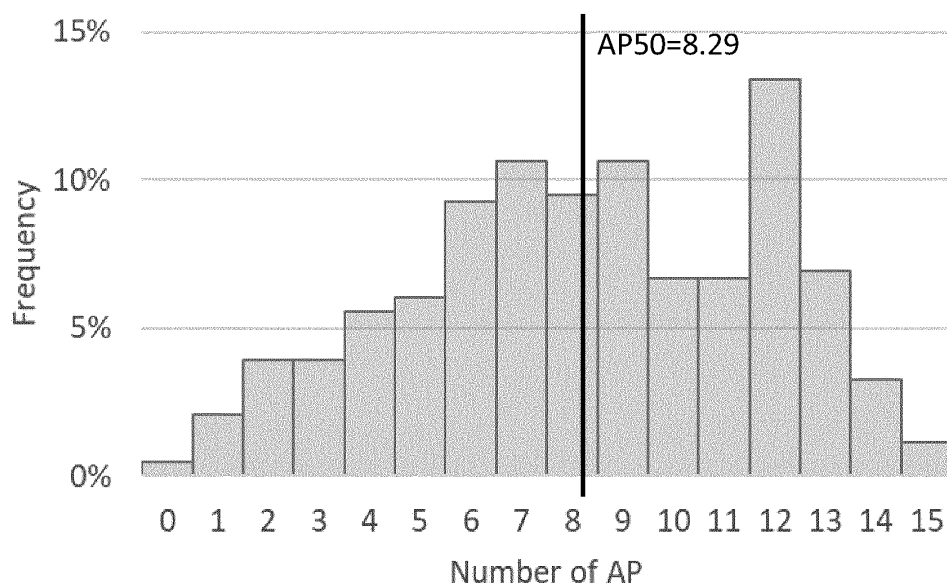
B



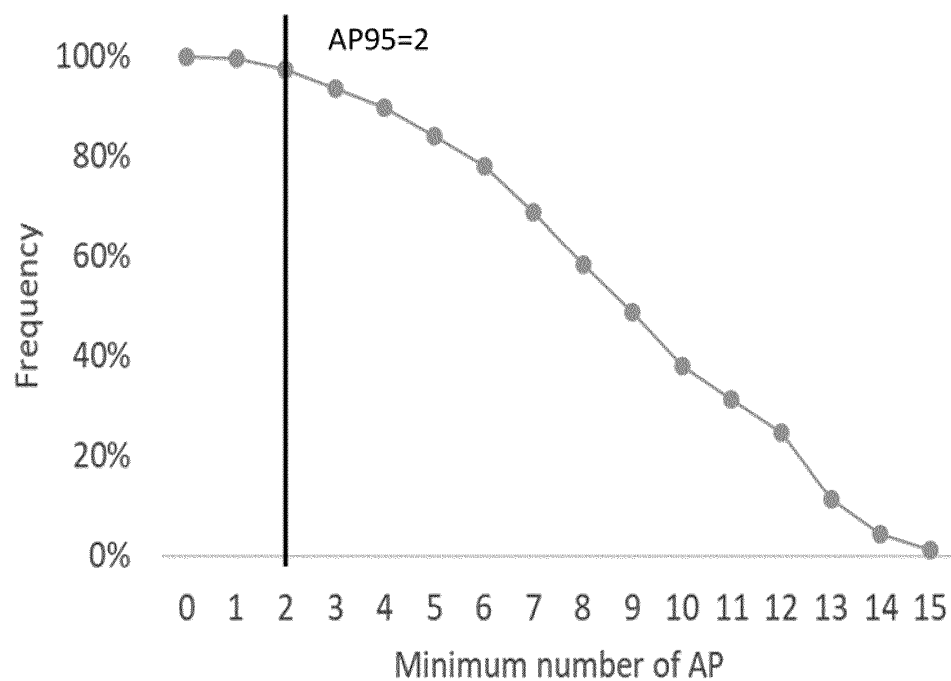
31 /47

Figure 26

A

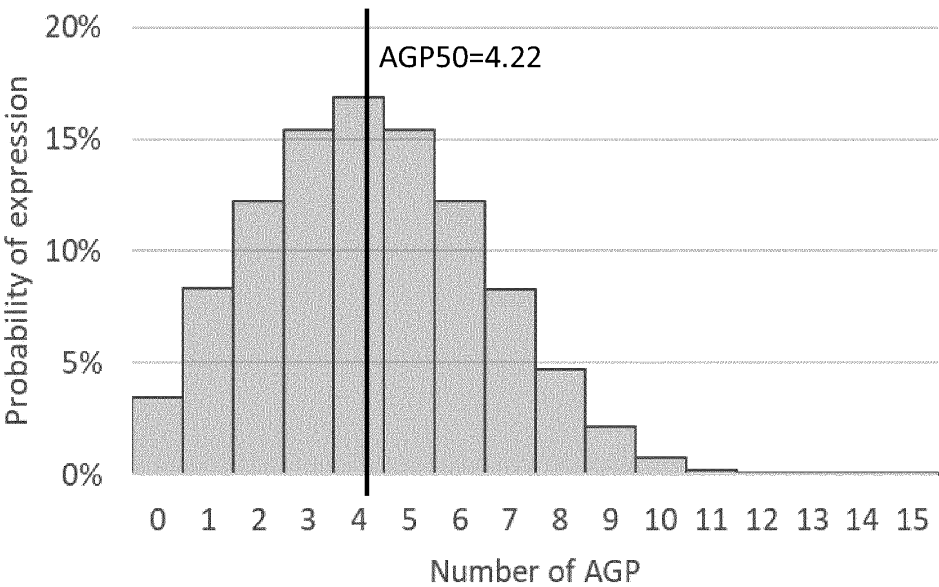


B

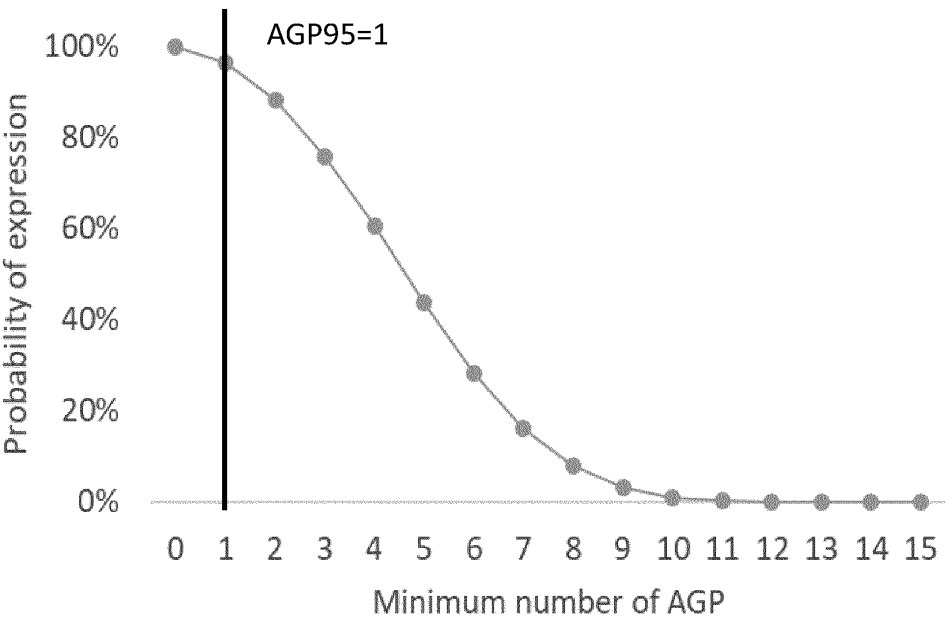


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Figure 27

A

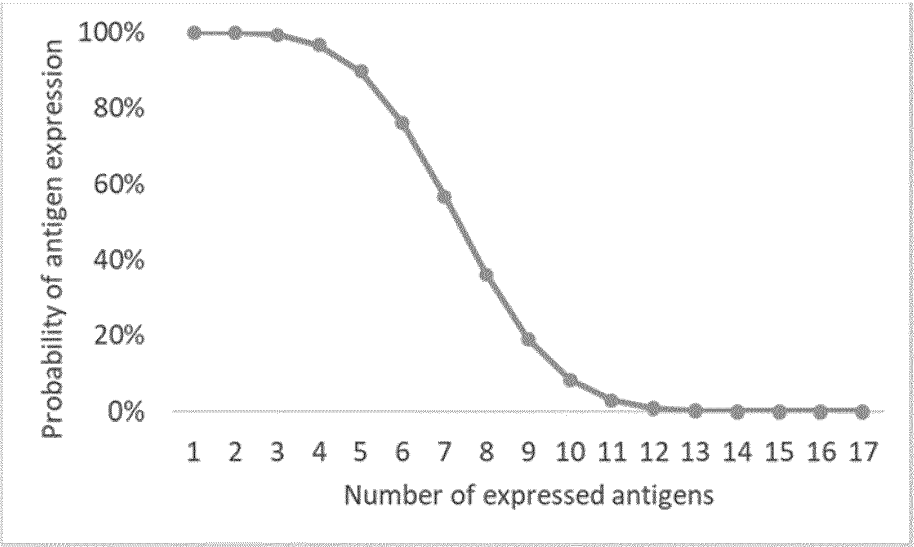


B



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Figure 28

Antigen	Expression level
PIWIL2	82%
SURVIVIN	62%
MAGE-A9	61%
MAGE-A8	57%
EpCAM	54%
CTAGE1	53%
MAGE-A3	42%
MAGE-A1	34%
NY-ESO-1	31%
LAGE-1	30%
MAGE-A12	29%
OY-TES-1	28%
MAGE-A10	28%
MAGE-C1	27%
MAGE-A2	25%
HAGE	24%
MAGE-C2	19%



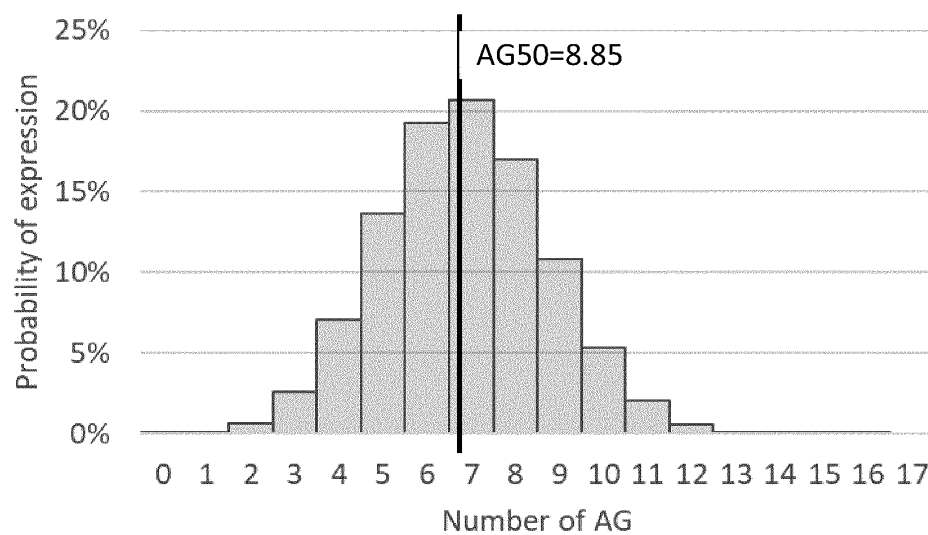
Conclusion:

- 1. 99% of the tumor express ≥ 3 antigens
- 2. No biopsy is needed

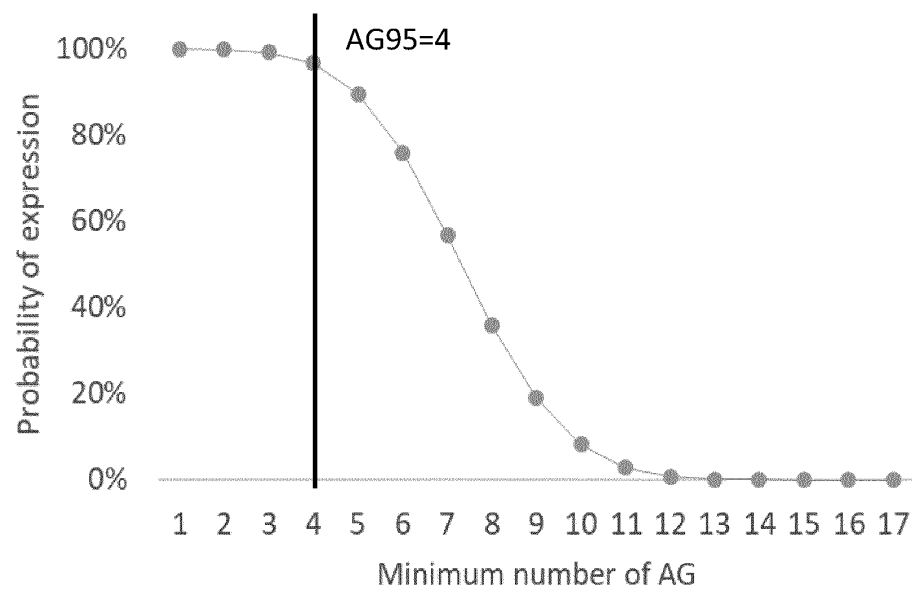
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Figure 29

A



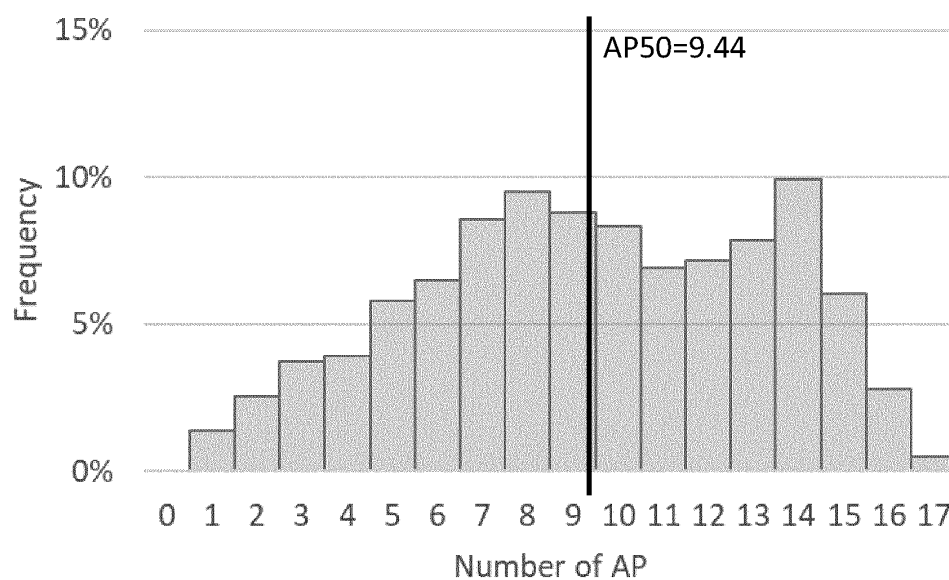
B



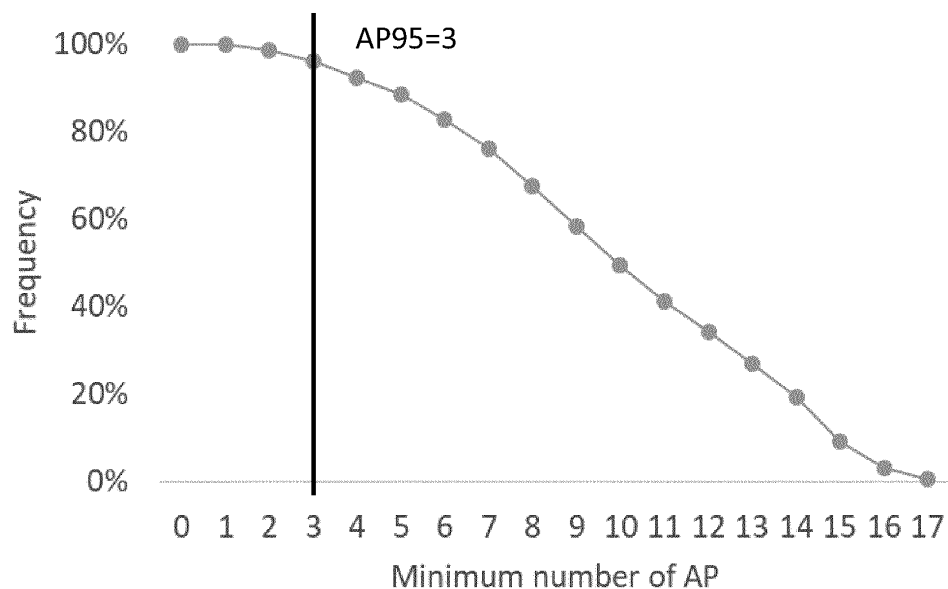
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Figure 30

A



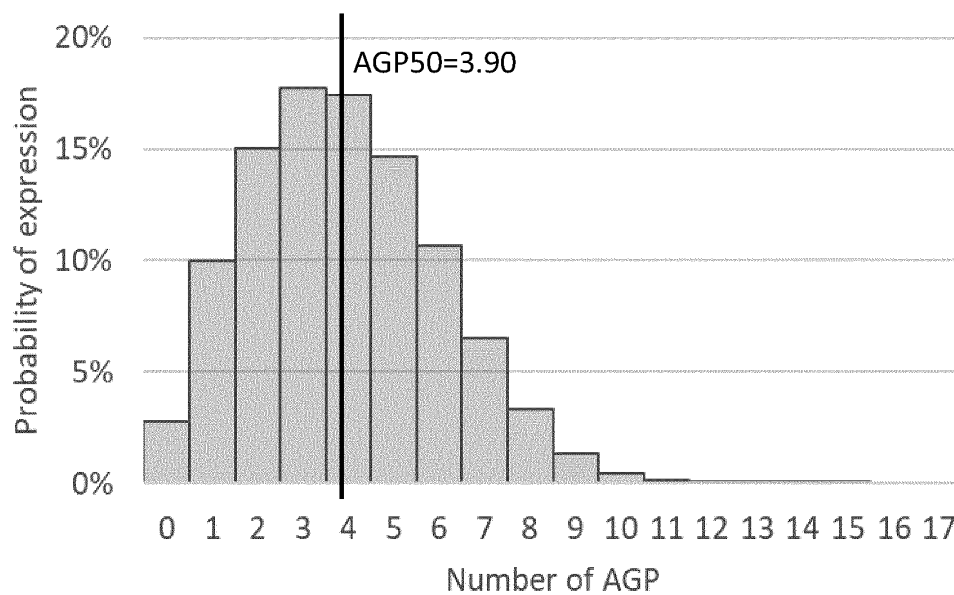
B



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Figure 31

A



B

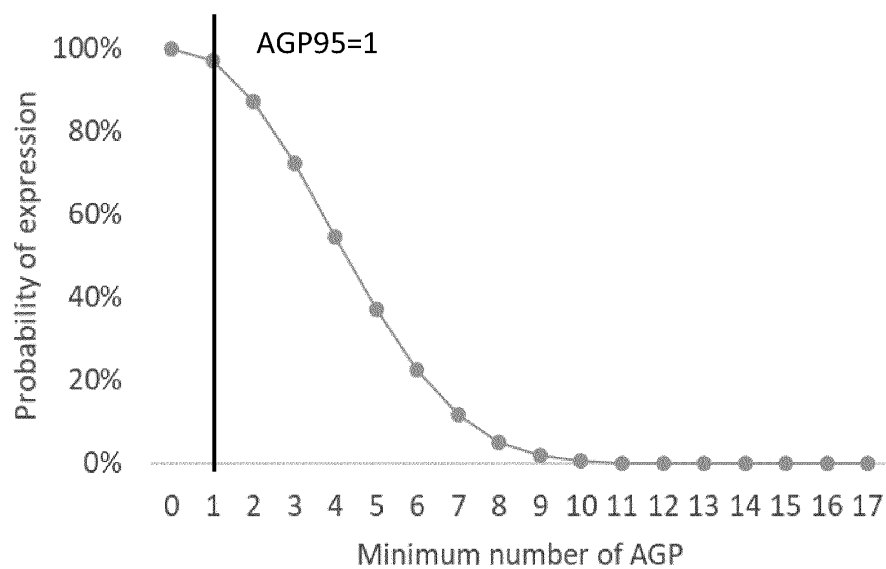
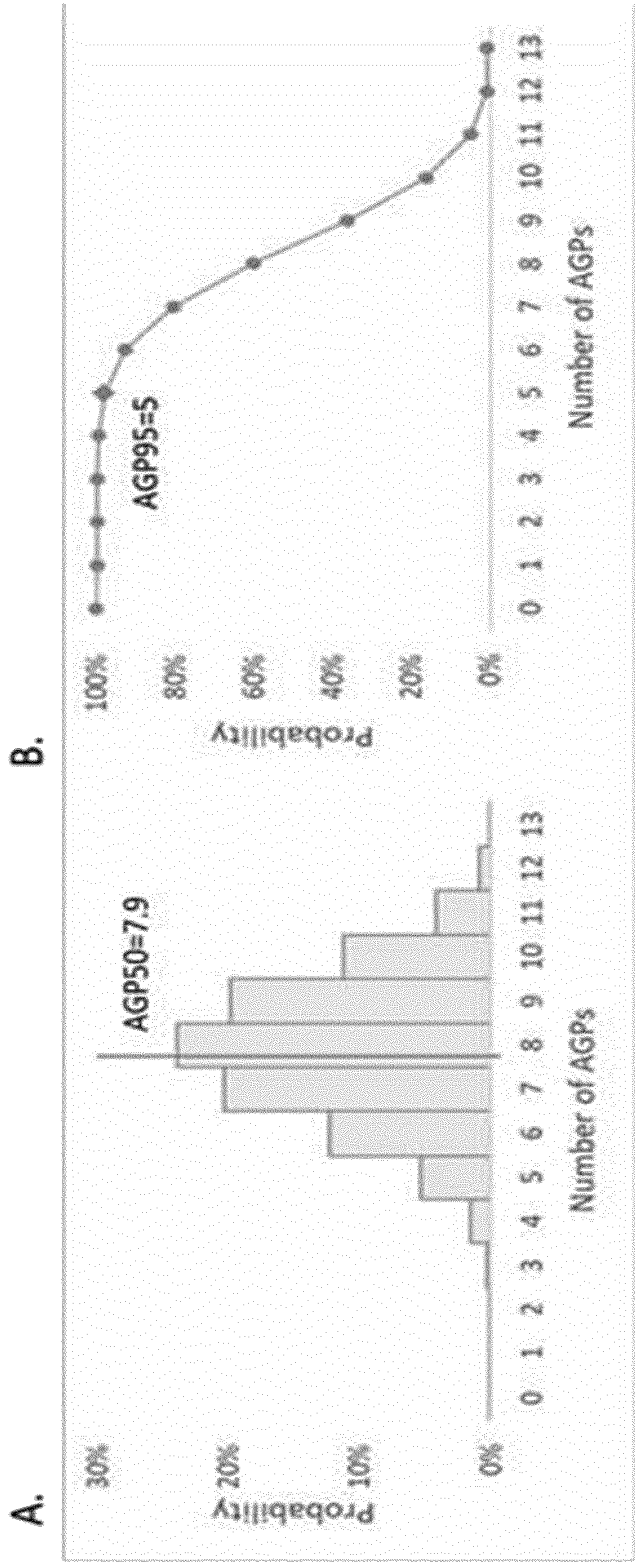


Figure 32



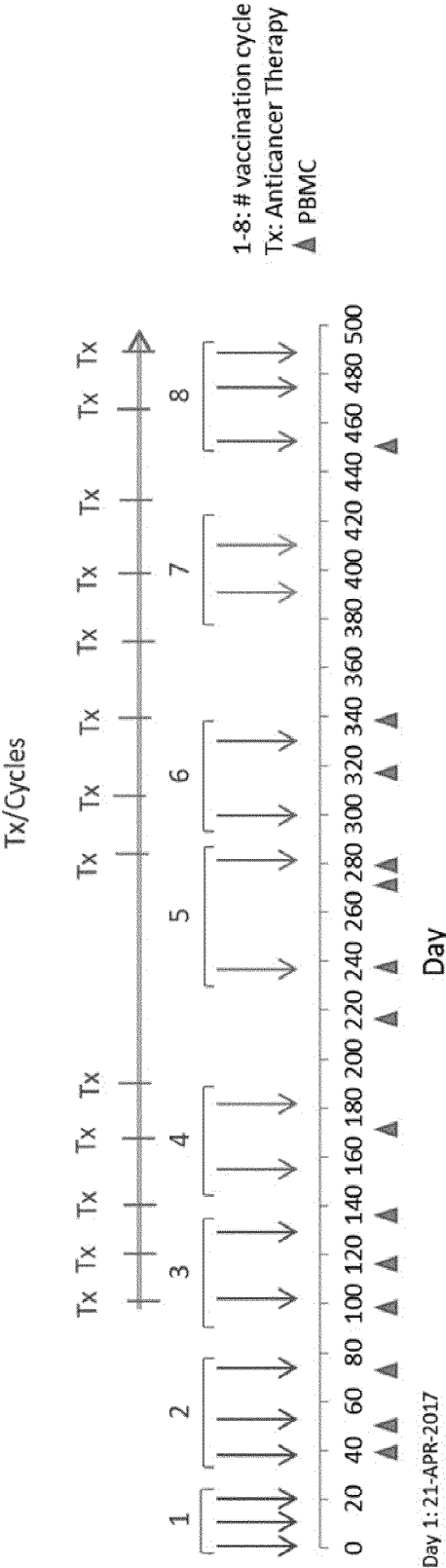
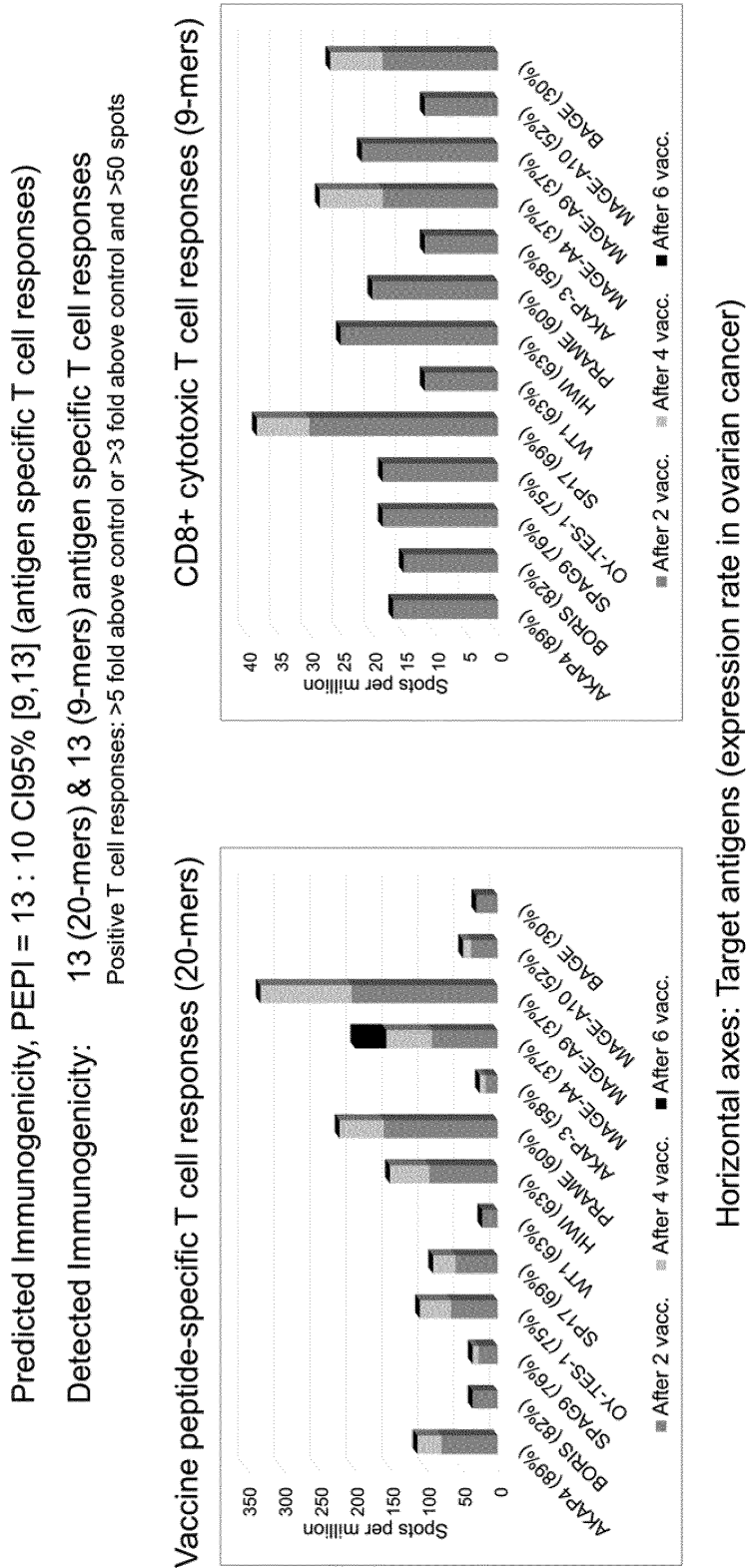
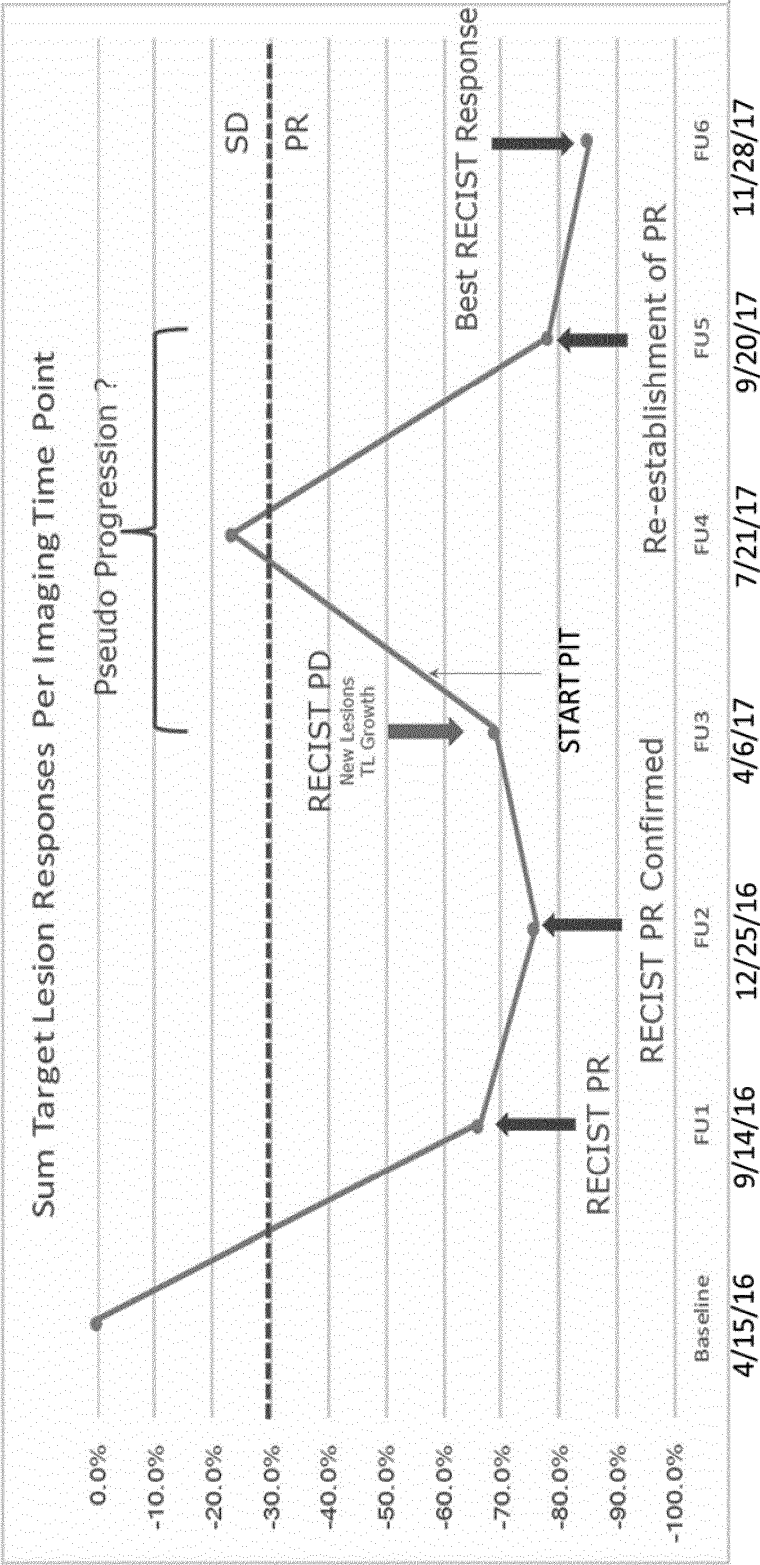


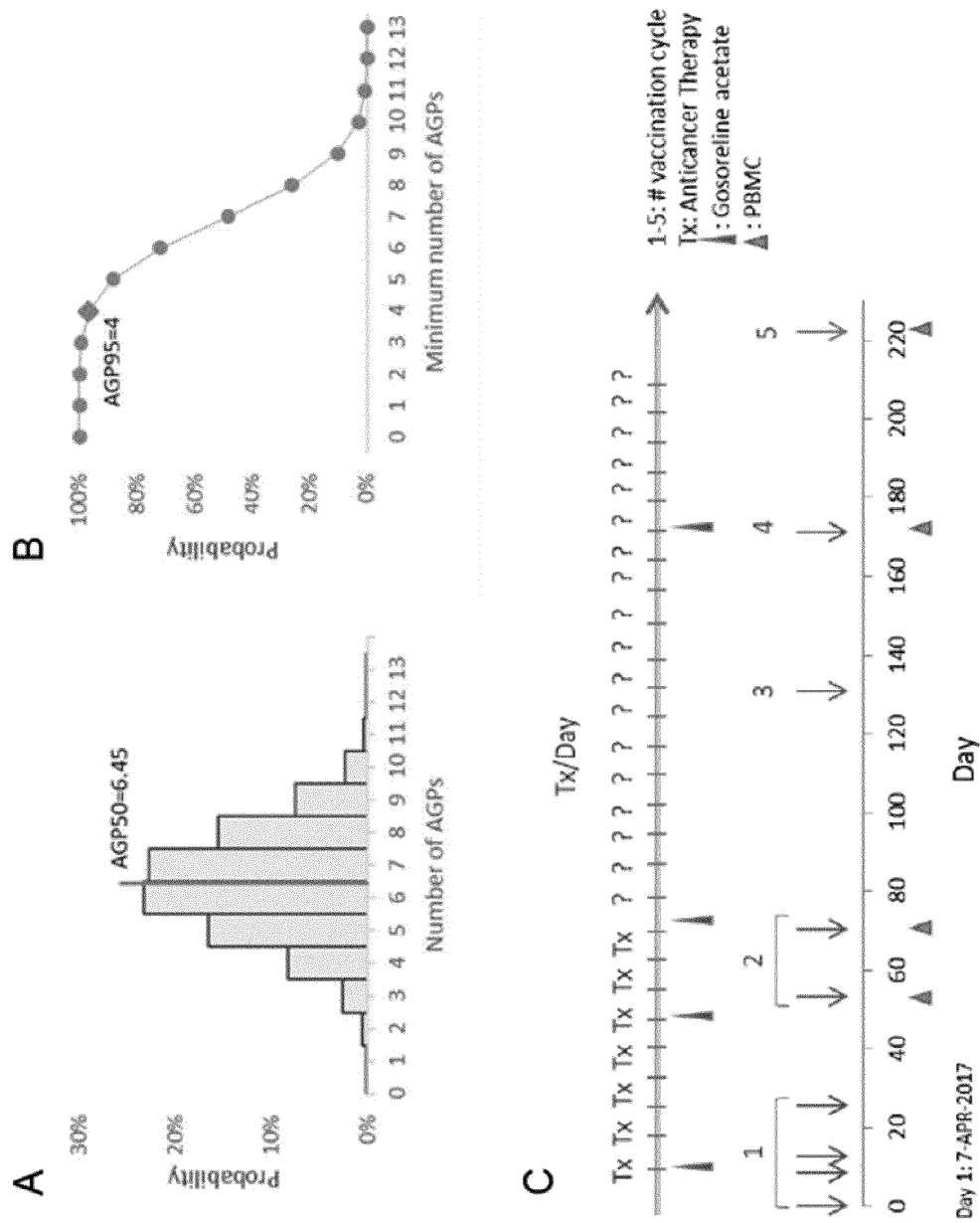
Figure 34





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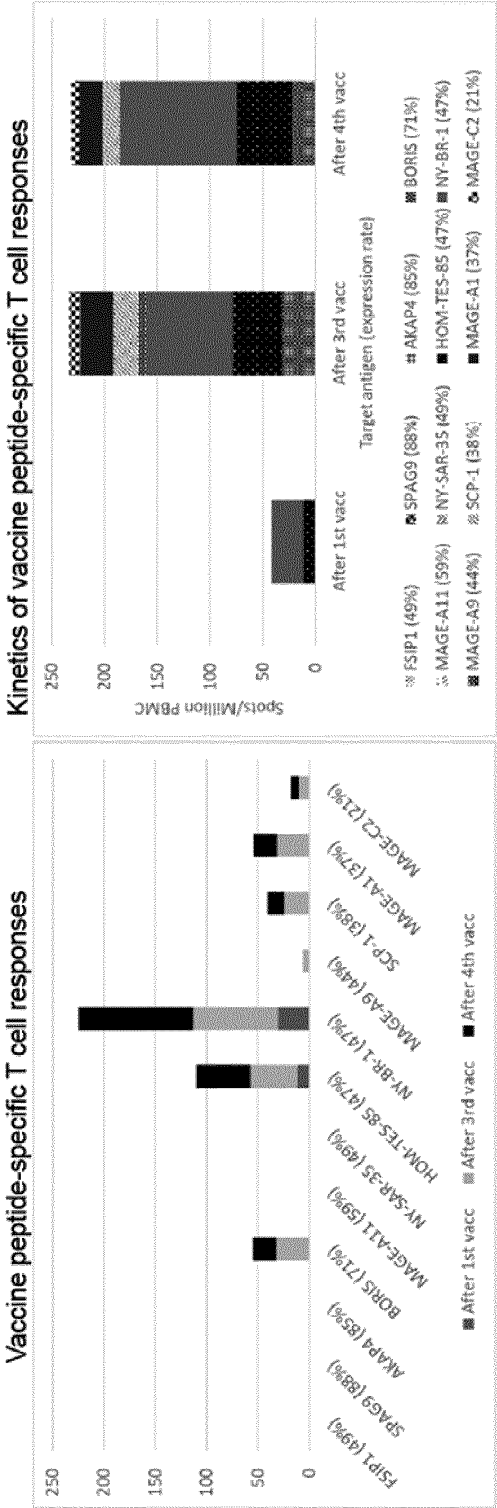
Figure 36



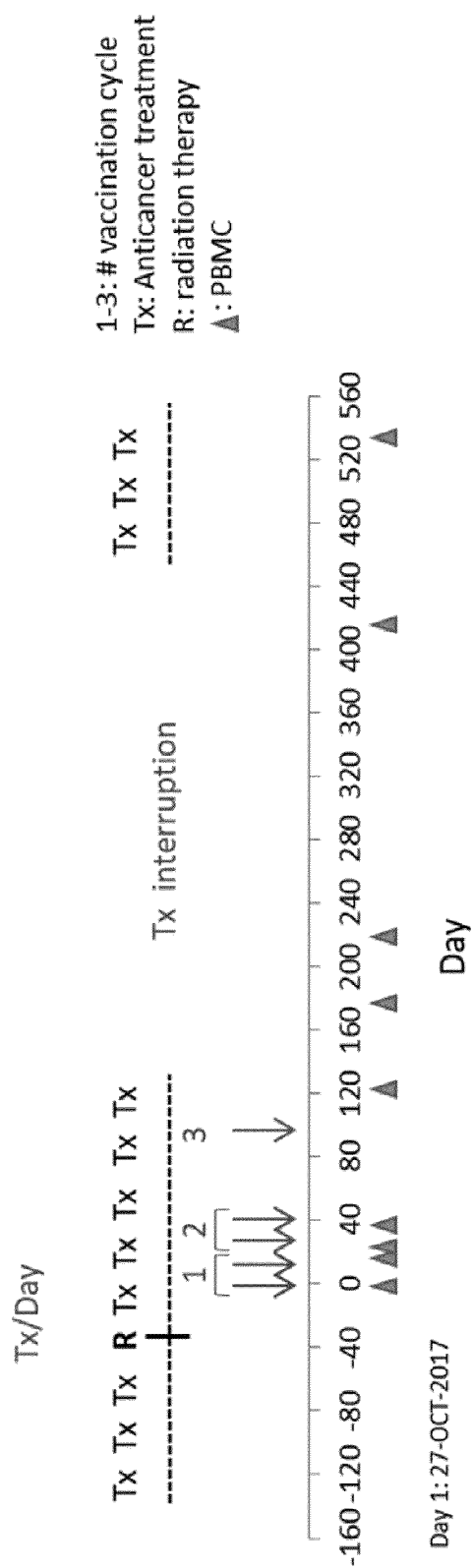
42 /47
Figure 37

Predicted Immunogenicity, PEPI = 12 : 10 CI95% [8, 12] (antigen specific T cell responses)

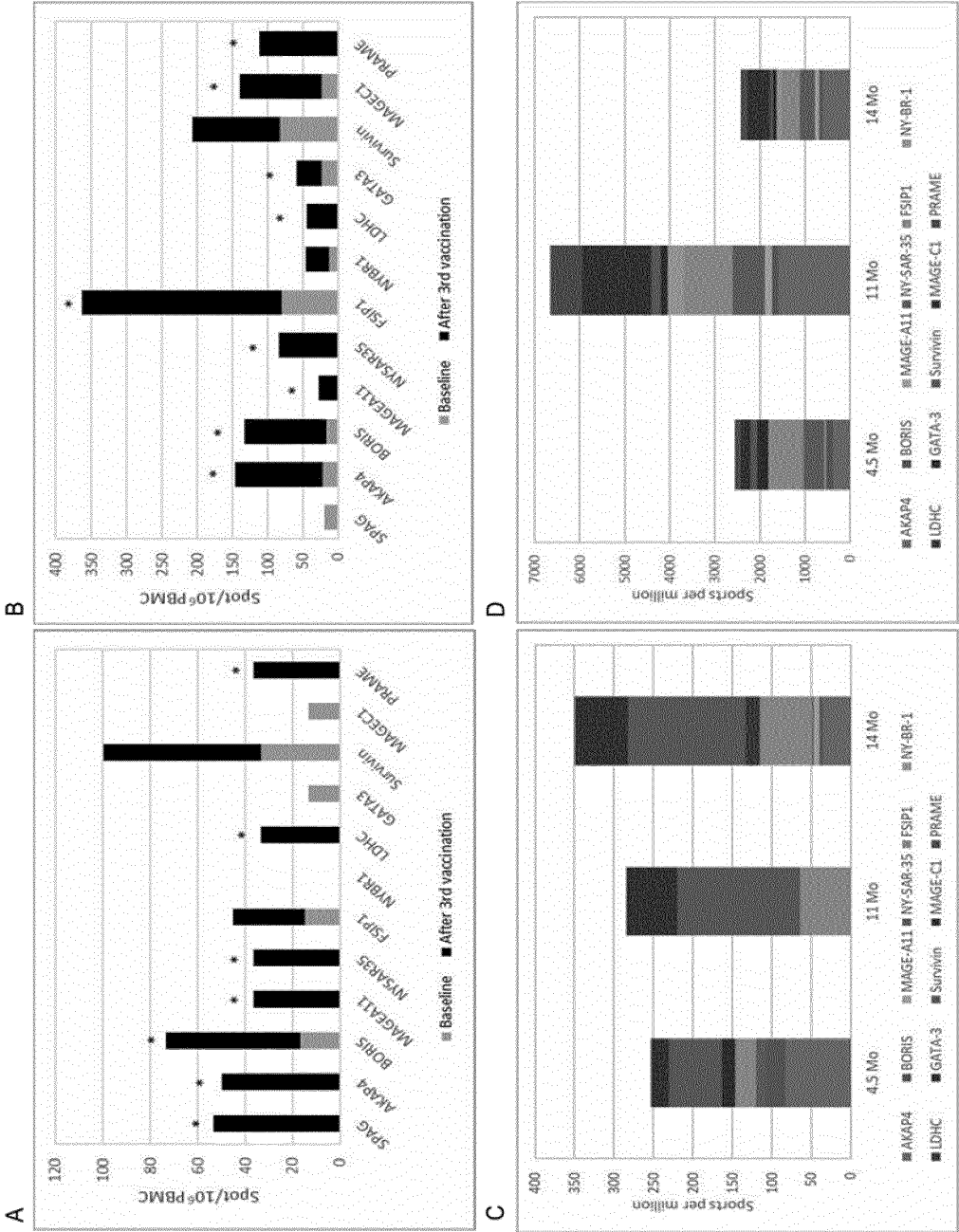
Detected Immunogenicity: 9 (20-mers) & 1 (9-mers) antigen (FSIP1) specific T cell responses
Positive T cell responses: >5 fold above control or >3 fold above control and >50 spots



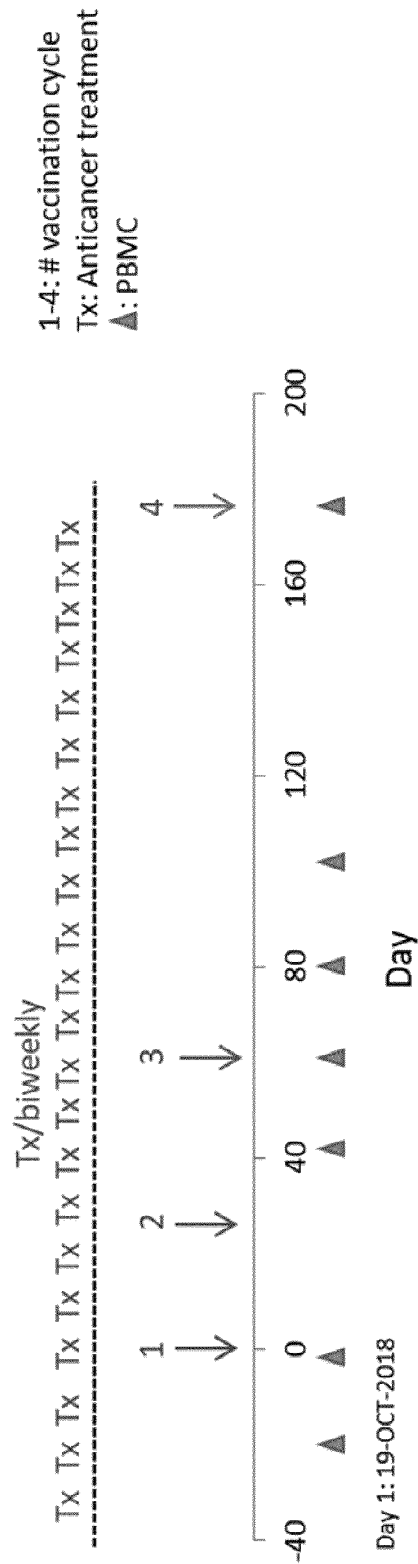
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Figure 38



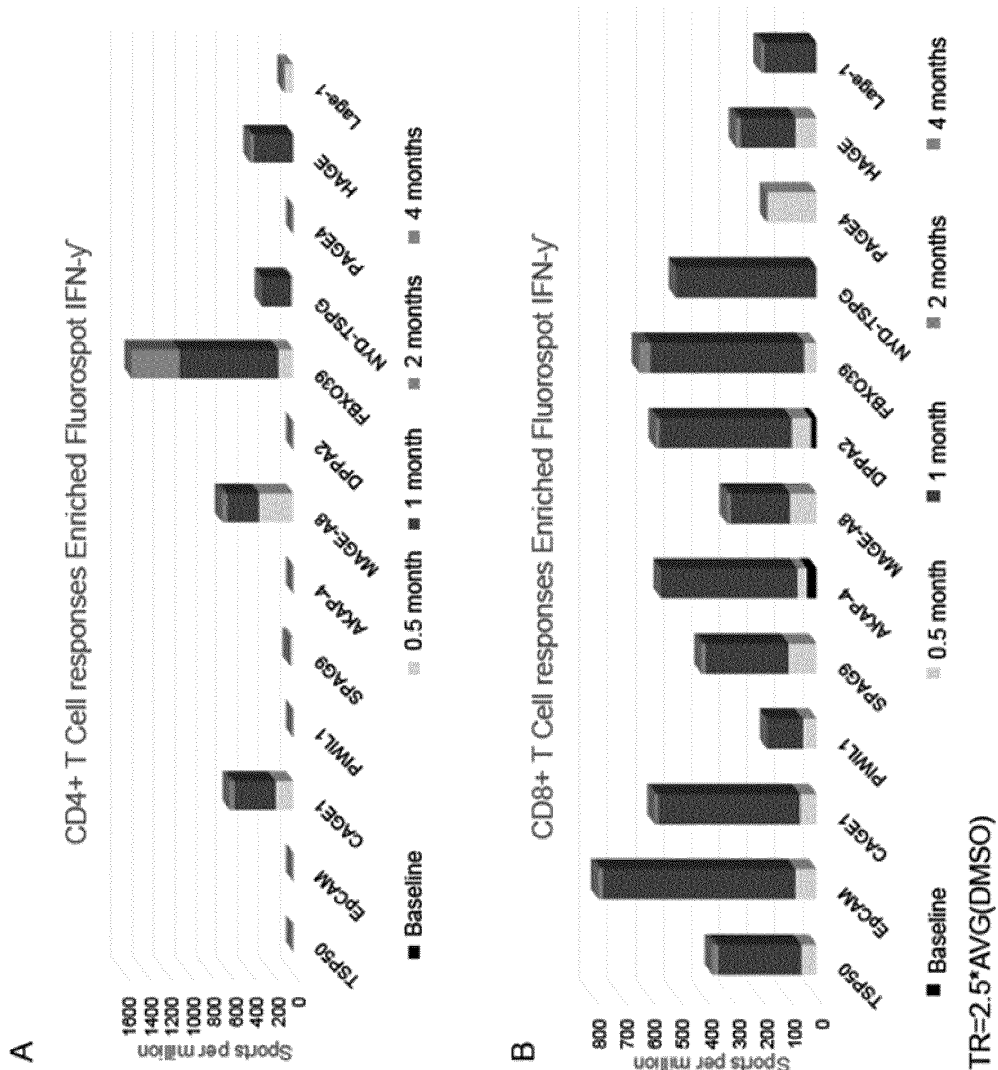
44 /47
Figure 39



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Figure 40



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Figure 41



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Figure 42

