Body System Category	Grades					Total
Toxicity	**1**	**2**	**3**	**4**	**5**	
Blood and lymphatic system disorders	**4**	**2**	**1**	**0**	**0**	**7**
Anemia	1	1	0	0	0	2
Lymph nodes enlarged	1	0	0	0	0	1
Lymphadenopathy	2	0	0	0	0	2
Neutropenia	0	1	1	0	0	2
Eye disorders	**3**	**0**	**0**	**0**	**0**	**3**
Blurred vision	1	0	0	0	0	1
Dry eye	1	0	0	0	0	1
Exotropia	1	0	0	0	0	1
Gastrointestinal disorders	**20**	**1**	**0**	**0**	**0**	**21**
Abdominal or pelvic swelling, mass, or lump	1	0	0	0	0	1
Abdominal pain	1	0	0	0	0	1
Constipation	4	0	0	0	0	4
Diarrhea	1	0	0	0	0	1
Dyspepsia	4	0	0	0	0	4
Flatulence	1	0	0	0	0	1
Gas in stomach	2	0	0	0	0	2
Nausea	4	1	0	0	0	5
Rectal hemorrhage	1	0	0	0	0	1
Stomach pain	1	0	0	0	0	1
General disorders and administration site conditions	**8**	**4**	**0**	**0**	**0**	**12**
Fatigue	4	2	0	0	0	6
Feeling abnormal	3	0	0	0	0	3
Flu like symptoms	0	1	0	0	0	1
Malaise	0	1	0	0	0	1
Pain	1	0	0	0	0	1
Immune system disorders	**1**	**1**	**0**	**0**	**0**	**2**
Seasonal allergy	1	1	0	0	0	2
Infections and infestations	**7**	**0**	**1**	**0**	**0**	**8**
Appendicitis	0	0	1	0	0	1
Cold symptoms	1	0	0	0	0	1
Conjunctivitis	1	0	0	0	0	1
Folliculitis	1	0	0	0	0	1
Gonorrhea	1	0	0	0	0	1
Upper respiratory infection	3	0	0	0	0	3
Injury, poisoning and procedural complications	**6**	**2**	**0**	**1**	**0**	**9**
Alcohol intoxication	0	0	0	1	0	1
Bruising	2	0	0	0	0	2
Dog bite	1	0	0	0	0	1
Hamstring tendon injury	1	0	0	0	0	1
Infusion related reaction	2	0	0	0	0	2
Laceration of thumb	0	1	0	0	0	1
Wrist fracture	0	1	0	0	0	1
Investigations	**1**	**0**	**1**	**0**	**0**	**2**

Body System Category	Grades					Total
Supplemental Table 1: All Adverse Events.						
Toxicity	**1**	**2**	**3**	**4**	**5**	
Carbon dioxide decreased	1	0	0	0	0	1
Neutrophil count decreased	0	0	1	0	0	1
Metabolism and nutrition disorders	**6**	**4**	**0**	**0**	**0**	**10**
Hyperglycemia	2	2	0	0	0	4
Hypophosphatemia	2	1	0	0	0	3
Increased appetite	1	0	0	0	0	1
Type II diabetes mellitus	0	1	0	0	0	1
Unspecified vitamin D deficiency	1	0	0	0	0	1
Musculoskeletal and connective tissue disorders	**4**	**1**	**0**	**0**	**0**	**5**
Arthralgia	1	0	0	0	0	1
Back pain	1	0	0	0	0	1
Groin pain	1	0	0	0	0	1
Muscle cramps	1	0	0	0	0	1
Myalgia	0	1	0	0	0	1
Neoplasms benign, malignant and unspecified (incl cysts and polyps)	**1**	**1**	**0**	**0**	**0**	**2**
Anal warts	0	1	0	0	0	1
Colonic tubular adenoma	1	0	0	0	0	1
Nervous system disorders	**14**	**0**	**0**	**0**	**0**	**14**
Dizziness	3	0	0	0	0	3
Headache	4	0	0	0	0	4
Lethargy	1	0	0	0	0	1
Paresthesia	5	0	0	0	0	5
Tingling sensation	1	0	0	0	0	1
Psychiatric disorders	**5**	**0**	**0**	**0**	**0**	**5**
Anxiety	1	0	0	0	0	1
Depression	1	0	0	0	0	1
Insomnia	2	0	0	0	0	2
Libido decreased	1	0	0	0	0	1
Renal and urinary disorders	**2**	**0**	**0**	**0**	**0**	**2**
Hematuria	2	0	0	0	0	2
Respiratory, thoracic and mediastinal disorders	**10**	**2**	**2**	**0**	**0**	**14**
Aspiration	0	0	1	0	0	1
Chest congestion	2	0	0	0	0	2
Hiccups	3	1	0	0	0	4
Hypoxia	0	0	1	0	0	1
Nasal burning	1	1	0	0	0	2
Nasal congestion	1	0	0	0	0	1
Nasal sinus congestion	1	0	0	0	0	1
Sneezing	1	0	0	0	0	1
Sore throat	1	0	0	0	0	1
Skin and subcutaneous tissue disorders	**10**	**0**	**0**	**0**	**0**	**10**
Alopecia	1	0	0	0	0	1
Body odor	1	0	0	0	0	1
Dry skin	1	0	0	0	0	1

Supplemental Table 1: All Adverse Events.

Body System Category	Grades					Total
Toxicity	**1**	**2**	**3**	**4**	**5**	
Nail discoloration	1	0	0	0	0	1
Papular skin eruption	5	0	0	0	0	5
Pruritus	1	0	0	0	0	1
Vascular disorders	**1**	**1**	**0**	**0**	**0**	**2**
Hot flashes	1	0	0	0	0	1
Hypertension	0	1	0	0	0	1
Total	**103**	**19**	**5**	**1**	**0**	**128**

Data date 09/30/2019

Supplemental Table 2 CD8+IFNg+

	301			302			303			305			304			202			203			206		
	Aph#2	Aph#5	Net	Aph#2	Aph#5	Net	Aph#2	Aph#5	Net	Aph#2	Aph#5	Net	Aph#2	Aph#5	Net	Aph#2	Aph#5	Net	Aph#2	Aph#5	Net	Aph#2	Aph#5	Net
DMSO	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Gag-pool-1	0.35%	1.22%	0.87%	0.00%	0.01%	0.01%	0.00%	0.02%	0.02%	0.02%	0.01%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.39%	0.69%	0.30%	0.03%	0.00%	-0.03%
Gag-pool-2	0.01%	0.00%	-0.01%	0.00%	0.00%	0.00%	0.06%	0.13%	0.07%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.07%	0.06%	0.01%	0.00%	-0.03%
Gag-pool-3	0.00%	0.00%	0.00%	0.00%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.02%	0.02%	0.00%	0.00%	0.00%	0.04%	0.00%	-0.04%	0.00%	0.00%	0.00%	0.03%	0.00%	-0.03%
Gag-pool-4	0.02%	0.01%	-0.01%	0.00%	0.00%	0.00%	0.01%	0.00%	-0.01%	0.00%	0.02%	0.02%	0.01%	0.00%	-0.01%	0.05%	0.00%	-0.05%	0.00%	0.00%	0.00%	0.04%	0.00%	-0.04%
Gag-pool-5	0.01%	0.00%	-0.01%	0.00%	0.00%	0.00%	0.01%	0.03%	0.02%	0.01%	0.04%	0.03%	0.02%	0.00%	-0.02%	0.03%	0.00%	-0.03%	0.00%	0.00%	0.00%	0.01%	0.00%	-0.01%
Gag-pool-6	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.01%	0.01%	0.02%	0.02%	0.00%	0.00%	0.00%	0.07%	0.01%	-0.02%	0.13%	0.38%	0.25%	0.02%	0.01%	0.00%
Gag-pool-7	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.04%	0.03%	0.01%	0.00%	-0.01%	0.03%	0.01%	0.00%	0.01%	0.02%	0.01%	0.01%	0.01%	0.00%
Gag-pool-8	0.04%	0.00%	-0.04%	0.01%	0.02%	0.00%	0.00%	0.02%	0.02%	0.15%	0.11%	-0.05%	0.00%	0.00%	0.00%	0.05%	0.00%	-0.05%	0.01%	0.00%	-0.01%	0.01%	0.01%	0.00%
Gag-pool-9	0.13%	0.22%	0.09%	0.01%	0.01%	0.00%	0.00%	0.02%	0.02%	0.00%	0.01%	0.01%	0.01%	0.00%	-0.01%	0.02%	0.01%	-0.02%	0.00%	0.00%	0.00%	0.02%	0.01%	-0.01%
Gag-pool-10	0.04%	0.03%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.07%	0.07%	0.01%	0.01%	0.01%	0.00%	0.00%	0.00%	0.05%	0.00%	-0.05%	0.00%	0.01%	0.01%	0.02%	0.00%	-0.02%
Gag-pool-11	0.04%	0.01%	-0.03%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.02%	0.01%	0.00%	0.00%	0.00%	0.08%	0.00%	-0.08%	0.00%	0.01%	0.01%	0.12%	0.08%	-0.04%
Gag-pool-12	0.02%	0.00%	-0.02%	0.00%	0.03%	0.03%	0.00%	0.00%	0.00%	0.02%	0.00%	0.01%	0.03%	0.01%	-0.02%	0.05%	0.01%	-0.04%	0.02%	0.02%	0.01%	0.07%	0.00%	-0.07%
Gag-pool-13	0.01%	0.01%	-0.01%	0.01%	0.04%	0.03%	0.00%	0.00%	0.00%	0.01%	0.00%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.03%	0.00%	-0.03%
Gag-pool-14	0.15%	0.16%	0.01%	0.00%	0.00%	0.00%	0.03%	0.12%	0.09%	0.07%	0.06%	-0.01%	0.00%	0.00%	0.00%	0.11%	0.03%	-0.08%	0.01%	0.01%	0.01%	0.04%	0.08%	0.05%
Gag-pool-15	0.00%	0.07%	0.07%	0.00%	0.01%	0.01%	0.04%	0.02%	-0.02%	0.01%	0.00%	0.00%	0.01%	0.00%	-0.01%	0.04%	0.00%	-0.04%	0.00%	0.00%	0.00%	0.01%	0.00%	-0.01%
Gag-pool-16	0.00%	0.01%	0.01%	0.02%	0.01%	-0.01%	0.04%	0.02%	-0.02%	0.01%	0.00%	0.00%	0.01%	0.00%	-0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.04%	0.01%	-0.04%
Gag-pool-17	0.03%	0.00%	-0.03%	0.00%	0.00%	0.00%	0.06%	0.05%	-0.01%	0.00%	0.00%	0.00%	0.01%	0.00%	-0.01%	0.01%	0.00%	0.00%	0.00%	0.01%	0.01%	0.04%	0.01%	-0.04%
Gag-pool-18	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.03%	0.03%	0.03%	0.00%	-0.03%	0.01%	0.00%	-0.01%	0.00%	0.00%	0.00%	0.08%	0.27%	0.19%	0.02%	0.00%	-0.02%
Gag-pool-19	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.02%	0.00%	-0.02%	0.01%	0.00%	-0.01%	0.05%	0.00%	-0.05%	0.02%	0.00%	-0.02%	0.01%	0.00%	-0.01%
Gag-pool-20	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%	0.01%	0.00%	-0.01%	0.03%	0.01%	-0.03%	0.00%	0.00%	0.00%	0.02%	0.00%	-0.02%
Gag-pool-21	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.08%	1.30%	1.22%	0.01%	0.00%	-0.01%	0.02%	0.00%	-0.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.03%	0.00%	-0.02%
Gag-pool-22	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.02%	0.00%	-0.02%	0.23%	0.32%	0.08%	0.00%	0.00%	0.00%	0.02%	0.00%	-0.02%
Gag-pool-23	0.02%	0.00%	-0.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.00%	-0.01%	0.01%	0.00%	-0.01%	0.04%	0.02%	-0.02%	0.03%	0.00%	-0.03%	0.03%	0.00%	-0.03%
Gag-pool-24	0.00%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.01%	0.01%	0.02%	0.00%	-0.02%	0.02%	0.00%	-0.02%	0.02%	0.00%	-0.02%	0.01%	0.01%	0.01%	0.03%	0.00%	-0.03%
Gag-pool-25	0.01%	0.00%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.13%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.01%	0.00%	0.00%	0.00%	0.03%	0.00%	-0.03%
Gag-peptide-73	0.01%	0.00%	-0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.00%	-0.01%	0.02%	0.00%	-0.02%	0.01%	0.01%	0.00%	0.01%	0.04%	0.03%
Gag-peptide-81	0.01%	0.09%	0.08%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.02%	0.00%	-0.02%	0.03%	0.01%	-0.02%	0.01%	0.00%	-0.01%	0.03%	0.00%	-0.03%
Gag-peptide-93	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.05%	0.01%	-0.04%	0.00%	0.01%	0.01%	0.02%	0.00%	-0.02%
Gag-peptide-114	0.01%	0.00%	-0.01%	0.00%	0.00%	0.00%	0.04%	0.00%	-0.04%	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%	0.02%	0.01%	-0.01%	0.02%	0.01%	-0.02%	0.02%	0.03%	0.01%
			0.91%			0.08%			1.63%			-0.06%			-0.20%			-0.72%			0.78%			-0.51%
Number of responses in which there is more than 0.05% increase			3			0			4			0			0			1			3			0

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┌──────────────────┐          ┌─────────────────────────────┐
│   Enrollment     │          │   Assessed for eligibility  │
└──────────────────┘          └─────────────────────────────┘
                                            │
                                            ▼
                              ┌─────────────────────────────┐
                              │      No randomization       │
                              └─────────────────────────────┘
                                            │
                                            ▼
┌──────────────────┐          ┌─────────────────────────────────────┐
│   Allocation     │          │ Cohort 1 (N=3)                      │
└──────────────────┘          │   • ZFN modified cells no CTX       │
                              ├─────────────────────────────────────┤
                              │ Cohort 2 wt/wt (N=6)                │
                              │   ZFN modified cells with CTX       │
                              │     •   1 g/m2 (N=3)                │
                              │     •   1.5 g /m2 (N=3)             │
                              ├─────────────────────────────────────┤
                              │ Cohort 3 Delta 32/wt heterozygous   │
                              │ (N=5)                               │
                              │   ZFN modified cells with CTX       │
                              │     •   1 g/m2 (N=3)                │
                              │     •   1.5 g /m2 (N=2)             │
                              └─────────────────────────────────────┘
                                            │
                                            ▼
┌──────────────────┐          ┌─────────────────────────────┐
│   Follow-up      │          │   Lost to follow up (n=0)   │
└──────────────────┘          └─────────────────────────────┘
                                            │
                                            ▼
┌──────────────────┐          ┌─────────────────────────────┐
│   Analysis       │          │ Analyzed                    │
└──────────────────┘          │   Safety (n= 14)            │
                              │   Effectiveness (n=13)*     │
                              └─────────────────────────────┘
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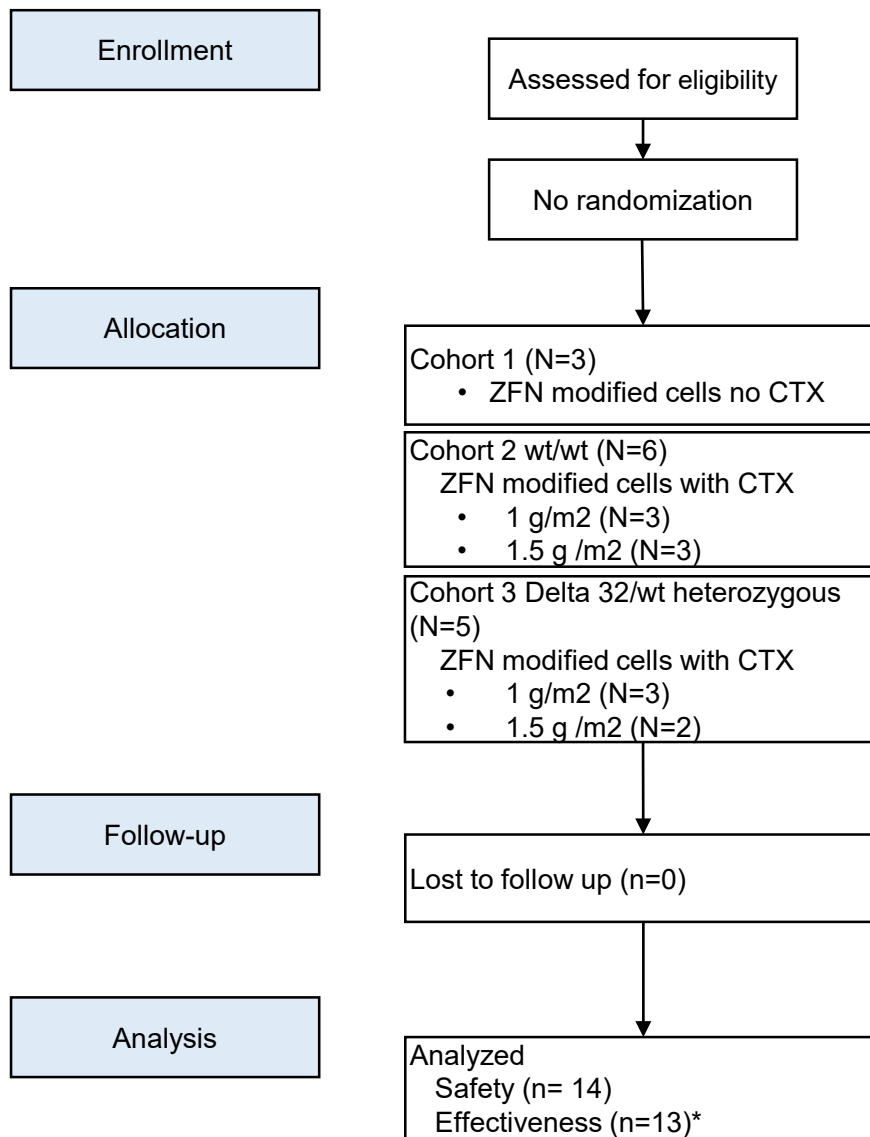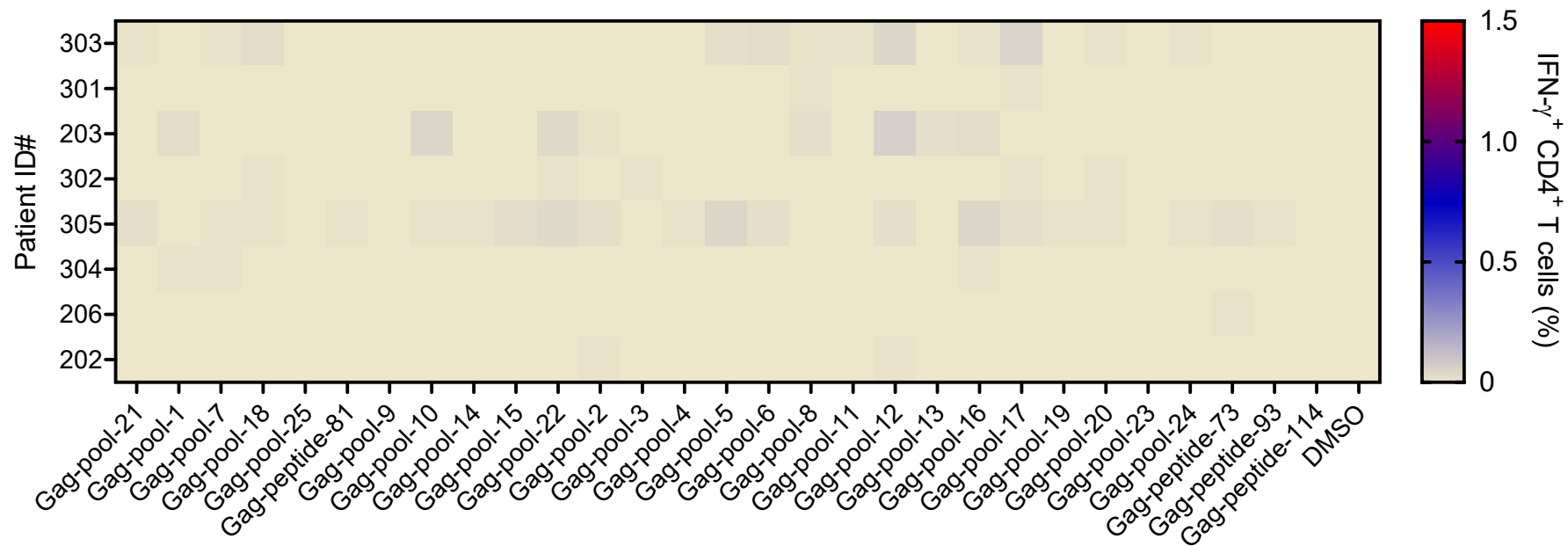
* 1 participant was excluded from the efficacy analysis because of detectable antiretroviral drug levels during the ATI

Supplemental Figure 1: Consort statement

Supplemental Figure 2: No substantial change in HIV-specific CD4 T cell response. Heat map showing the change in the % IFNγ positive CD4 T cells when exposed to the indicated peptide pool between apheresis #2 and #5.