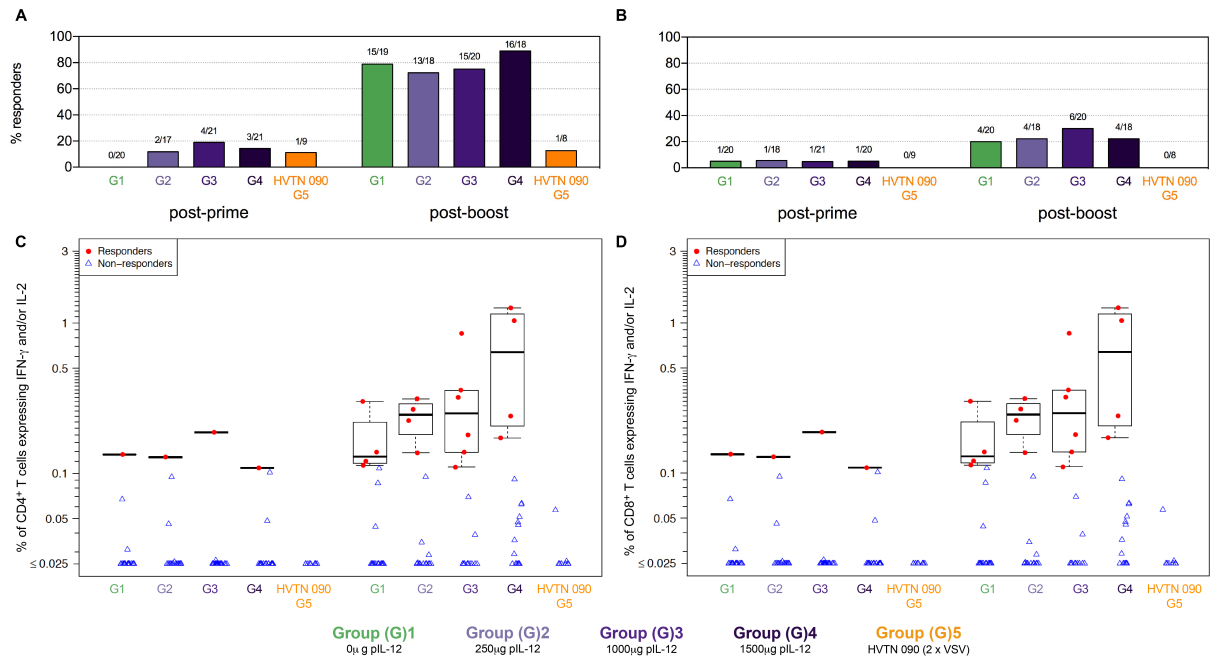
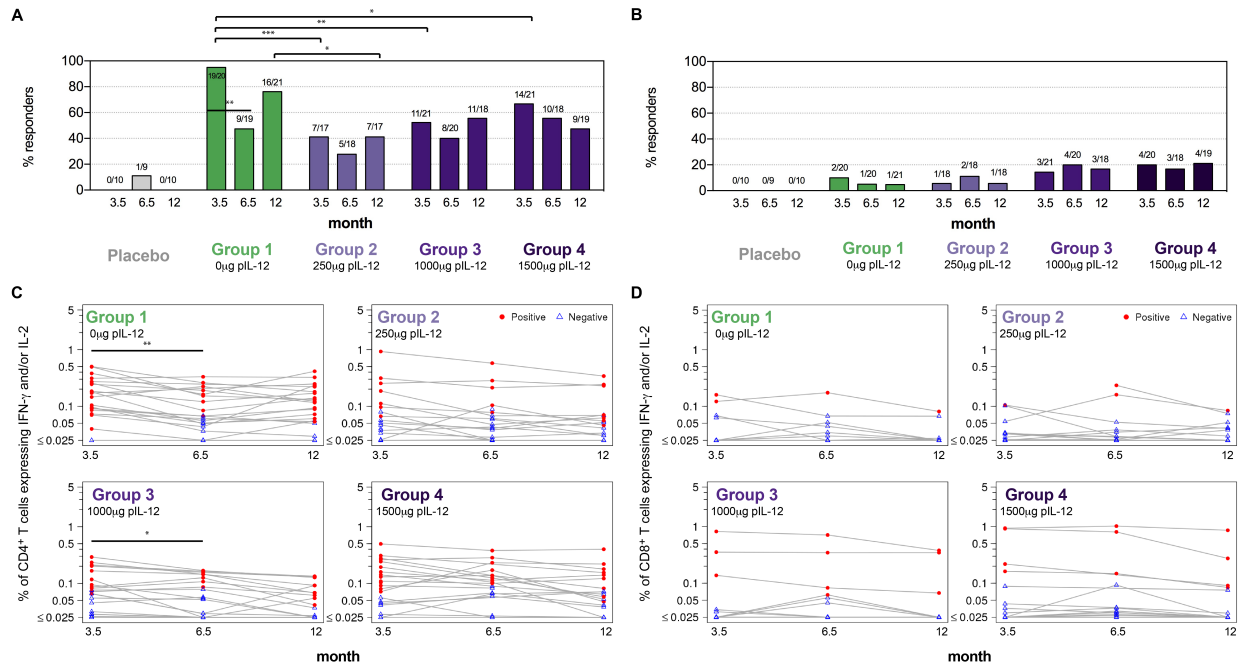


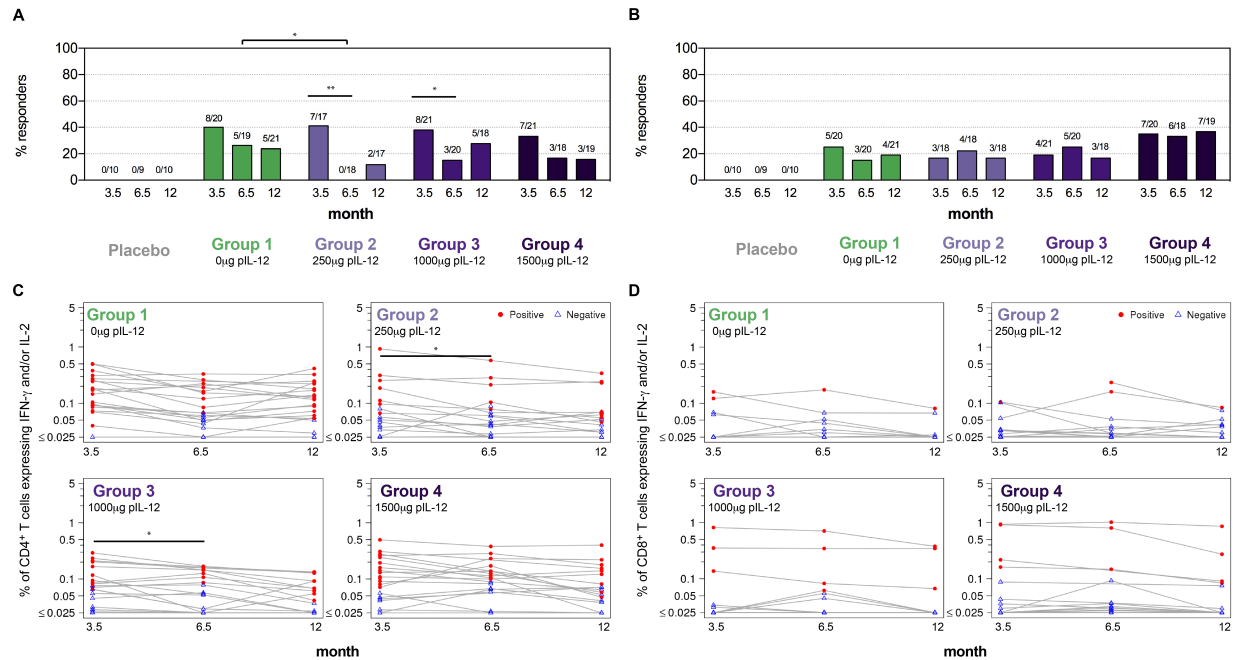
Supplemental Figures



Supplemental Figure S1. Gag-specific T-cell responses in HVTN 087 compared to HVTN 090. CD4⁺ (A, C) and CD8⁺ (B, D) T-cell responses to Gag were measured two weeks post-prime and two weeks post-boost by ICS. Shown are response rates (%) (A, B) and response magnitudes (C, D), of CD4⁺ or CD8⁺ T cells producing IFN- γ and/or IL-2 for vaccinees in each treatment group of HVTN 087 (Groups 1-4) and for Group 5 in HVTN 090 (3.4×10^7 PFU VSV-Gag at months 0 and 2). Positive responses are shown in filled red circles, negative responses are shown in open blue triangles (C, D).



Supplemental Figure S2. Longitudinal Env-specific T-cell responses. CD4⁺ (A, C) and CD8⁺ (B, D) T-cell responses to Env were measured two weeks (DNA), 3 months (early memory), and 9 months after the 3rd DNA vaccination (late memory) by ICS. Shown are response rates (%) (A, B) and response magnitudes (C, D), of CD4⁺ or CD8⁺ T cells producing IFN- γ and/or IL-2 for placebo recipients (combined for groups 1-4) and vaccinees in each treatment group. Positive responses are shown in filled red circles, negative responses are shown in open blue triangles (C, D). Response rates were compared using Fisher's exact test (A, B); response magnitudes were compared using Wilcoxon Rank Sum test for the comparisons between treatment groups among responders, and using Wilcoxon Signed-Rank test for the comparisons between visits among the participants with a positive response at either or both visits (C, D). *: $P \leq 0.05$; **: $P \leq 0.01$; ***: $P \leq 0.001$; bars without tails for the comparisons between visits within the same group, bars with tails for the comparisons between treatment groups.



Supplemental Figure S3. Longitudinal Pol-specific T-cell responses. CD4⁺ (A, C) and CD8⁺ (B, D) T-cell responses to Pol were measured two weeks (DNA), 3 months (early memory), and 6 months after the 3rd DNA vaccination (late memory) by ICS. Shown are response rates (%) (A, B) and response magnitudes (C, D), of CD4⁺ or CD8⁺ T cells producing IFN- γ and/or IL-2 for placebo recipients (combined for groups 1-4) and vaccinees in each treatment group. Positive responses are shown in filled red circles, negative responses are shown in open blue triangles (C, D). Response rates were compared using Fisher's exact test (A, B); response magnitudes were compared using Wilcoxon Rank Sum test for the comparisons between treatment groups among responders, and using Wilcoxon Signed-Rank test for the comparisons between visits among participants with a positive response at either or both visits (C, D). *: $P \leq 0.05$; **: $P \leq 0.01$; bars without tails for the comparisons between visits, bars with tails for the comparisons between treatment groups.

Supplemental Tables

Supplemental Table 1. Response rates measured two weeks after the third DNA prime (prime), two weeks after the VSV boost (*boost*), or 6 months after the last vaccination (memory) for each of the vaccine antigens (Ag)

	Time point	Ag	Placebo	Group 1	Group 2	Group 3	Group 4
				0µg pIL-12	250µg pIL-12	1000µg pIL-12	1500µg pIL-12
CD4 ⁺ T cells	prime	Gag	0% (0/10)	0% (0/20)	12% (2/17)	19% (4/21)	14% (3/21)
		Env	0% (0/10)	95% (19/20)	41% (7/17)	52% (11/21)	67% (14/21)
		Pol	0% (0/10)	40% (8/20)	41% (7/17)	38% (8/21)	33% (7/21)
		Nef	0% (0/10)	0% (0/20)	0% (0/17)	0% (0/21)	0% (0/21)
		Vif	0% (0/10)	5% (1/20)	0% (0/17)	0% (0/21)	0% (0/21)
	boost	Gag	0% (0/9)	79% (15/19)	72% (13/18)	75% (15/20)	89% (16/18)
		Env	11% (1/9)	47% (9/19)	28% (5/18)	40% (8/20)	56% (10/18)
		Pol	0% (0/9)	26% (5/19)	0% (0/18)	15% (3/20)	17% (3/18)
		Nef	0% (0/9)	0% (0/19)	0% (0/18)	0% (0/20)	0% (0/18)
		Vif	0% (0/9)	0% (0/19)	0% (0/18)	0% (0/20)	6% (1/18)
	memory	Gag	0% (0/10)	52% (11/21)	53% (9/17)	39% (7/18)	47% (9/19)
		Env	0% (0/10)	76% (16/21)	41% (7/17)	56% (10/18)	47% (9/19)
		Pol	0% (0/10)	24% (5/21)	12% (2/17)	28% (5/18)	16% (3/19)
		Nef	0% (0/10)	0% (0/21)	0% (0/17)	0% (0/18)	0% (0/19)
		Vif	0% (0/10)	0% (0/21)	0% (0/17)	6% (1/18)	5% (1/19)
CD8 ⁺ T cells	prime	Gag	0% (0/10)	5% (1/20)	6% (1/18)	5% (1/21)	5% (1/20)
		Env	0% (0/10)	10% (2/20)	6% (1/18)	14% (3/21)	20% (4/20)
		Pol	0% (0/10)	25% (5/20)	17% (3/18)	19% (4/21)	35% (7/20)
		Nef	0% (0/10)	0% (0/20)	6% (1/18)	10% (2/21)	10% (2/20)
		Vif	0% (0/10)	10% (2/20)	6% (1/18)	10% (2/21)	10% (2/20)
	boost	Gag	0% (0/9)	20% (4/20)	22% (4/22)	30% (6/20)	22% (4/18)
		Env	0% (0/9)	5% (1/20)	11% (2/18)	20% (4/20)	17% (3/18)
		Pol	0% (0/9)	15% (3/20)	22% (4/18)	25% (5/20)	33% (6/18)
		Nef	0% (0/9)	0% (0/20)	0% (0/18)	5% (1/20)	6% (1/18)
		Vif	0% (0/9)	0% (0/20)	6% (1/18)	10% (2/20)	6% (1/18)
	memory	Gag	0% (0/10)	5% (1/21)	11% (2/18)	22% (4/18)	21% (4/19)
		Env	0% (0/10)	5% (1/21)	6% (1/18)	17% (3/18)	21% (4/19)
		Pol	0% (0/10)	19% (4/21)	17% (3/18)	17% (3/18)	37% (7/19)
		Nef	0% (0/10)	5% (1/21)	6% (1/18)	11% (2/18)	5% (1/19)
		Vif	0% (0/10)	0% (0/21)	0% (0/18)	11% (2/18)	5% (1/19)