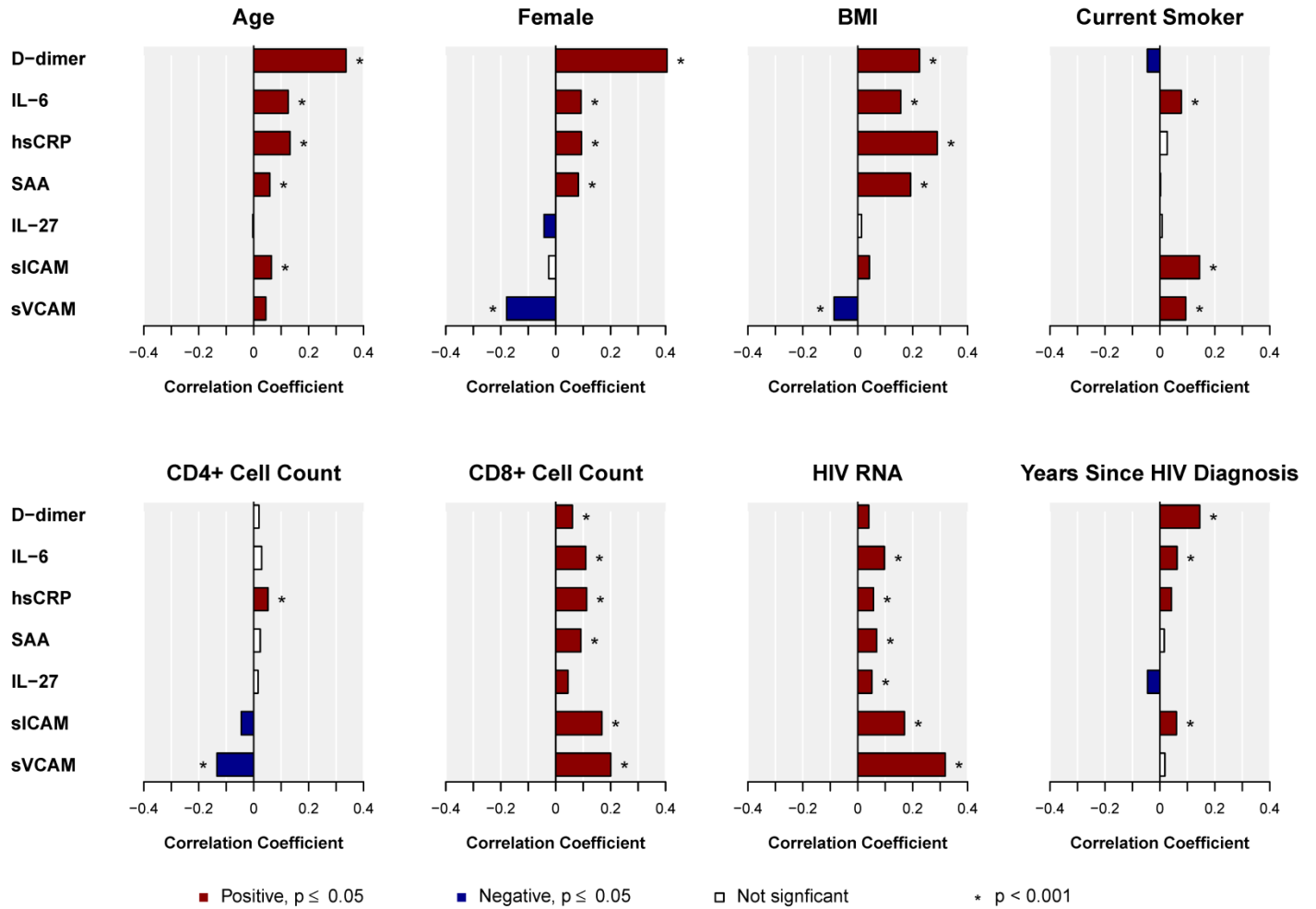


Supplemental Figure A: Correlations between baseline demographic and clinical factors and baseline biomarkers (n=4299).



Legend: Spearman rank correlation coefficients are presented as horizontal bars. Bars to the right (red) represent positive correlations, and bars to the left (blue) represent inverse correlations. A p-value < 0.001 is denoted by an asterisk (*), and a p-value ≤ 0.05 by filled in bars. Clear (white) bars denote non-significant correlations. IL = interleukin; hsCRP = high sensitivity C-reactive protein; SAA = Serum Amyloid A; sICAM = soluble intercellular adhesion molecule; sVCAM = soluble vascular cellular adhesion molecule.

Supplemental Table A: Median [IQR] Biomarkers Levels at Baseline and Month 8 for Participants with Baseline and Month 8 Measurements, by Study Arm (n=3980)

	Baseline Median [IQR]	Month 8 Median [IQR]
Immediate ART Group, n=1975		
D-Dimer (µg/mL)	0.32 [0.22, 0.49]	0.28 [0.19, 0.43]
IL-6 (pg/mL)	1.41 [0.98, 2.15]	1.27 [0.85, 1.97]
hsCRP (µg/mL)	1.82 [0.75, 4.23]	1.80 [0.75, 4.65]
SAA (mg/L)	4.69 [2.58, 9.04]	3.80 [2.12, 7.87]
IL-27 (pg/mL)	245 [125, 520]	241 [111, 532]
sICAM (µg/mL)	547 [426, 698]	484 [372, 622]
sVCAM (µg/mL)	722 [562, 937]	563 [452, 707]
Deferred ART Group, n=2005		
D-Dimer (µg/mL)	0.32 [0.23, 0.50]	0.33 [0.23, 0.53]
IL-6 (pg/mL)	1.38 [0.97, 2.09]	1.41 [0.97, 2.15]
hsCRP (µg/mL)	1.64 [0.71, 3.81]	1.76 [0.79, 4.24]
SAA (mg/L)	4.38 [2.46, 8.49]	4.50 [2.52, 8.75]
IL-27 (pg/mL)	241 [121, 497]	252 [118, 503]
sICAM (µg/mL)	548 [427, 700]	550 [427, 709]
sVCAM (µg/mL)	731 [570, 923]	725 [562, 925]

IQR= interquartile range

Supplemental Table B: Biomarker Changes* from Baseline to Month 8 with Immediate versus Deferred ART Initiation in START for Subgroups Defined by Baseline CD4+ Cell Count.

Biomarkers	CD4+ count, cells/ μ L	Month 8 Minus Baseline Level of Biomarker Expressed as Percent Change from Baseline*			P-value*
		Immediate (I)	Deferred (D)	I-D Difference	
D-dimer					<i>0.27</i>
	<600	-12.1 [-15.6, -8.4]	5.3 [1.1, 9.6]	-17.4	
	600-800	-14.3 [-17.1, -11.5]	7.3 [3.8, 10.9]	-21.7	
	>800	-8.9 [-13.4, -4.0]	6.5 [1.2, 12.1]	-15.4	
IL-6					<i>0.032</i>
	<600	-12.8 [-16.9, -8.6]	0.2 [-4.4, 5.1]	-13.1	
	600-800	-8.5 [-12.0, -4.9]	5.3 [1.3, 9.4]	-13.8	
	>800	-6.2 [-11.7, -0.4]	-2.2 [-7.8, 3.8]	-4.1	
hsCRP					<i>0.049</i>
	<600	-5.1 [-13.1, 3.7]	6.2 [-2.6, 15.9]	-11.4	
	600-800	6.8 [-0.5, 14.6]	9.9 [2.4, 18.0]	-3.2	
	>800	26.3 [12.9, 41.2]	10.6 [-1.0, 23.4]	15.7	
SAA					<i>0.56</i>
	<600	-19.0 [-25.5, -11.9]	1.2 [-6.8, 9.9]	-20.2	
	600-800	-10.6 [-16.4, -4.4]	2.2 [-4.5, 9.3]	-12.8	
	>800	-5.6 [-15.0, 5.0]	4.2 [-6.1, 15.7]	-9.8	
IL-27					<i>0.10</i>
	<600	-5.0 [-10.7, 1.0]	-6.8 [-12.3, -1.0]	1.7	
	600-800	-5.7 [-10.2, -0.9]	0.3 [-4.5, 5.4]	-6.0	
	>800	-5.3 [-12.4, 2.4]	2.6 [-5.0, 10.8]	-7.9	
sICAM					<i>0.048</i>
	<600	-14.8 [-17.2, -12.3]	0.7 [-2.1, 3.5]	-15.5	
	600-800	-10.9 [-12.9, -8.8]	-0.0 [-2.3, 2.3]	-10.9	
	>800	-9.1 [-12.3, -5.8]	-0.6 [-4.0, 3.0]	-8.5	
svCAM					<i><0.001</i>
	<600	-24.6 [-26.6, -22.6]	1.3 [-1.3, 3.9]	-25.9	
	600-800	-20.9 [-22.5, -19.2]	-0.3 [-2.3, 1.9]	-20.6	
	>800	-20.0 [-22.6, -17.3]	-3.9 [-7.0, -0.7]	-16.1	

* Analysis of variance models, adjusted for baseline biomarker value. P-value in italics is for treatment by subgroup interaction (1dF interaction test with continuous CD4+ variable). Number in group: < 600 (n=1262), 600-800 (n=1927), >800 (n=791).

dF = degrees of freedom, IL = interleukin; hsCRP = high sensitivity C-reactive protein; SAA = Serum Amyloid A; sICAM = soluble intercellular adhesion molecule; sVCAM = soluble vascular cellular adhesion molecule.

Supplemental Table C: Biomarker Changes* from Baseline to Month 8 with Immediate versus Deferred ART Initiation in START for Subgroups Defined by Baseline CD8+ Cell Count.

Biomarkers	CD8+ count, cells/ μ L	Month 8 Minus Baseline Level of Biomarker Expressed as Percent Change from Baseline*			P-value*
		Immediate (I)	Deferred (D)	I-D Difference	
D-dimer					<i>0.025</i>
	<850	-9.4 [-13.0, -5.7]	6.2 [2.0, 10.5]	-15.6	
	850-1250	-11.8 [-15.2, -8.4]	8.8 [4.6, 13.2]	-20.6	
	>1250	-16.3 [-19.7, -12.8]	4.4 [0.4, 8.6]	-20.7	
IL-6					<i>0.001</i>
	<850	-4.6 [-9.0, -0.1]	-2.5 [-7.0, 2.2]	-2.1	
	850-1250	-11.0 [-14.9, -6.9]	1.8 [-2.8, 6.6]	-12.8	
	>1250	-12.0 [-16.2, -7.7]	7.6 [2.7, 12.6]	-19.6	
hsCRP					<i>0.024</i>
	<850	10.1 [0.9, 20.1]	2.7 [-5.9, 12.1]	7.4	
	850-1250	5.2 [-3.2, 14.4]	5.1 [-3.5, 14.4]	0.2	
	>1250	4.5 [-4.4, 14.2]	15.1 [5.7, 25.4]	-10.7	
SAA					<i>0.14</i>
	<850	-10.0 [-17.2, -2.3]	-1.3 [-9.1, 7.3]	-8.8	
	850-1250	-15.5 [-22.0, -8.5]	-0.3 [-8.1, 8.1]	-15.2	
	>1250	-11.1 [-18.3, -3.3]	6.3 [-2.0, 15.2]	-17.4	
IL-27					<i>0.040</i>
	<850	-1.5 [-7.3, 4.7]	-1.6 [-7.4, 4.6]	0.1	
	850-1250	-3.6 [-9.0, 2.2]	-3.9 [-9.5, 2.0]	0.4	
	>1250	-11.1 [-16.5, -5.5]	-0.4 [-6.1, 5.7]	-10.7	
sICAM					<i><0.001</i>
	<850	-10.1 [-12.6, -7.6]	-2.0 [-4.7, 0.8]	-8.1	
	850-1250	-13.0 [-15.3, -10.6]	-1.1 [-3.8, 1.6]	-11.9	
	>1250	-12.1 [-14.6, -9.6]	3.1 [0.3, 6.0]	-15.2	
svCAM					<i><0.001</i>
	<850	-20.1 [-22.2, -18.0]	-2.9 [-5.4, -0.4]	-17.2	
	850-1250	-22.4 [-24.3, -20.5]	-2.2 [-4.7, 0.3]	-20.2	
	>1250	-23.4 [-25.4, -21.3]	3.5 [0.9, 6.2]	-26.9	

* Analysis of variance models, adjusted for baseline biomarker value. P-value in italics is for treatment by subgroup interaction (1dF interaction test with continuous CD8+ variable). Number in group: < 850 (n=1280), 850-1250 (n=1363), >1250 (n=1288).

dF = degrees of freedom, IL = interleukin; hsCRP = high sensitivity C-reactive protein; SAA = Serum Amyloid A; sICAM = soluble intercellular adhesion molecule; sVCAM = soluble vascular cellular adhesion molecule.

Supplemental Table D: Biomarker Changes* from Baseline to Month 8 with Immediate versus Deferred ART Initiation in START for Subgroups Defined by Baseline HIV RNA Level.

Biomarkers	HIV RNA, copies/mL	Month 8 Minus Baseline Level of Biomarker Expressed as Percent Change from Baseline*			P-value*
		Immediate (I)	Deferred (D)	I-D Difference	
D-dimer					<i><0.001</i>
	<5,000	-2.8 [-6.7, 1.3]	4.8 [0.7, 9.1]	-7.6	
	5,000-29,999	-12.6 [-15.9, -9.2]	6.9 [2.9, 11.0]	-19.5	
	≥ 30,000	-20.6 [-23.7, -17.4]	7.8 [3.6, 12.2]	-28.4	
IL-6					<i><0.001</i>
	<5,000	-5.5 [-10.0, -0.9]	-6.8 [-11.0, -2.3]	1.2	
	5,000-29,999	-8.6 [-12.6, -4.4]	2.2 [-2.2, 6.8]	-10.8	
	≥ 30,000	-13.7 [-17.6, -9.7]	11.7 [6.6, 17.0]	-25.4	
hsCRP					<i><0.001</i>
	<5,000	20.6 [10.2, 31.8]	0.8 [-7.6, 10.0]	19.8	
	5,000-29,999	6.8 [-1.7, 16.1]	4.8 [-3.4, 13.8]	2.0	
	≥ 30,000	-5.5 [-13.2, 3.0]	22.4 [12.3, 33.5]	-27.9	
SAA					<i>0.002</i>
	<5,000	-7.3 [-14.9, 0.9]	-3.3 [-10.9, 5.1]	-4.1	
	5,000-29,999	-12.1 [-18.7, -4.9]	-4.1 [-11.3, 3.6]	-7.9	
	≥ 30,000	-16.9 [-23.4, -9.9]	15.9 [6.7, 25.8]	-32.8	
IL-27					<i>0.08</i>
	<5,000	-1.1 [-7.1, 5.3]	-2.8 [-8.5, 3.3]	1.7	
	5,000-29,999	-4.5 [-9.9, 1.2]	-0.8 [-6.3, 5.1]	-3.7	
	≥ 30,000	-10.2 [-15.4, -4.6]	-1.2 [-7.0, 5.0]	-9.0	
sICAM					<i><0.001</i>
	<5,000	-6.9 [-9.5, -4.2]	-2.2 [-4.9, 0.6]	-4.7	
	5,000-29,999	-12.6 [-14.9, -10.2]	0.1 [-2.5, 2.8]	-12.7	
	≥ 30,000	-15.1 [-17.4, -12.8]	2.4 [-0.4, 5.3]	-17.6	
svCAM					<i><0.001</i>
	<5,000	-16.7 [-18.9, -14.5]	-4.3 [-6.7, -1.8]	-12.5	
	5,000-29,999	-23.0 [-24.9, -21.1]	-0.1 [-2.5, 2.3]	-22.9	
	≥ 30,000	-25.2 [-27.0, -23.2]	2.9 [0.3, 5.6]	-28.1	

* Analysis of variance models, adjusted for baseline biomarker value. P-value in italics is for treatment by subgroup interaction (1dF interaction test with continuous HIV RNA variable). Number in group: < 5,000 (n=1244), 5,000-29,999 (n=1422), ≥30,000 (n=1309).

dF = degrees of freedom; *IL* = interleukin; *hsCRP* = high sensitivity C-reactive protein; *SAA* = Serum Amyloid A; *sICAM* = soluble intercellular adhesion molecule; *svCAM* = soluble vascular cellular adhesion molecule.