

**Supplemental Table 1: ART Regimens**

ART Regimens	
Two or more Nucleoside Reverse Transcriptase Inhibitors (NRTI) in combination with: (1) A Non-Nucleoside Reverse Transcriptase Inhibitor (NNRTI) (2) Ritonavir plus one or more Protease Inhibitor (PI) (3) A Protease Inhibitor (PI) (4) An Integrase Inhibitor (II)	<b>Regimen Type</b>
	NNRTI
	Boosted PI
	Unboosted PI
(5) Three or more NRTI containing abacavir and not including an II, PI, or NNRTI	II
(6) Three or more antiretroviral medications from at least two different categories (NRTI, PI, NNRTI, II) not meeting any other criteria	3NRTI
	Other

**Supplemental Table 2: Type of Refractive Surgery by Refractive Error**

<b>CPT</b>	<b>ICD9</b>							<b>Total</b>
	<b>367.00</b>	<b>367.10</b>	<b>367.20</b>	<b>367.21</b>	<b>367.40</b>	<b>367.81</b>	<b>367.90</b>	
<b>65760</b>	0	1	0	0	0	0	0	1
<b>65771</b>	0	0	1	1	0	0	0	2
<b>65772</b>	0	0	0	0	1	0	0	1
<b>66999</b>	1	8	2	0	1	0	0	12
<b>S0800</b>	1	6	7	5	2	0	1	22
<b>S0810</b>	0	19	12	5	0	1	4	41
<b>Total</b>	2	34	22	11	4	1	5	79

**Supplemental Table 3. Baseline characteristics of HIV+ participants with refractive surgery by complications**

	Overall	complications		P-value
	N (%) or Median (IQR)	No (%) or Median (IQR)	Yes (%) or Median (IQR)	
<b>Participants</b>	79	73	6	
<b>Demographics</b>				
<b>Age at surgery</b>	31.2 (26.6,38.7)	31.3 (26.7,38.7)	28.8 (26.6,31.2)	0.437
<b>Gender</b>				0.4651
<i>Male</i>	73 (92.4)	67 (91.8)	6 (100.0)	
<i>Female</i>	6 (7.6)	6 (8.2)	0 (0.0)	
<b>Race</b>				0.4928
<i>Caucasian</i>	31 (39.2)	28 (38.4)	3 (50.0)	
<i>African-American</i>	34 (43.0)	31 (42.5)	3 (50.0)	
<i>Hispanic/Other</i>	14 (17.7)	14 (19.2)	0 (0.0)	
<b>Marital status</b>				0.5789
<i>Single</i>	37 (46.8)	33 (45.2)	4 (66.7)	
<i>Married</i>	40 (50.6)	38 (52.1)	2 (33.3)	
<i>N/A</i>	2 (2.5)	2 (2.7)	0 (0.0)	
<b>Rank</b>				0.4106
<i>Officer/Warrant</i>	15 (19.0)	15 (20.5)	0 (0.0)	
<i>Enlisted</i>	62 (78.5)	56 (76.7)	6 (100.0)	
<i>N/A (e.g. Dependent)</i>	2 (2.5)	2 (2.7)	0 (0.0)	
<b>Duty Status</b>				0.8889
<i>Active Duty</i>	60 (75.9)	55 (75.3)	5 (83.3)	
<i>Retired</i>	18 (22.8)	17 (23.3)	1 (16.7)	
<i>Dependent</i>	1 (1.3)	1 (1.4)	0 (0.0)	
<b>Service</b>				0.0836
<i>Air Force</i>	7 (8.9)	7 (9.6)	0 (0.0)	
<i>Army</i>	25 (31.6)	25 (34.2)	0 (0.0)	
<i>Marines</i>	8 (10.1)	8 (11.0)	0 (0.0)	
<i>Navy</i>	39 (49.4)	33 (45.2)	6 (100.0)	
<b>HIV related</b>				
<b>Age HIV dx</b>	25.5 (22.8,31.3)	25.5 (22.7,32.1)	25.5 (24.5,26.9)	0.8099
<b>CD4 at HIV dx (cells/ul)</b>	505.0 (380.0,615.0)	506.0 (380.0,614.0)	469.0 (462.0,628.0)	0.6667
<b>VL at HIV dx (log10 copies/ml)</b>	4.5 (3.9,4.8)	4.5 (3.9,4.8)	4.1 (2.4,5.1)	0.5757
<b>HIV to surgery</b>	4.1 (2.1,7.7)	4.1 (2.1,7.7)	4.0 (2.2,4.4)	0.7113
<b>Age ART star</b>	28.7 (23.9,34.3)	28.7 (23.7,35.3)	28.7 (25.2,33.5)	0.966
<b>ART Initiation Era</b>				0.4305
<i>1996-2000</i>	18 (22.8)	16 (21.9)	2 (33.3)	
<i>2001-2008</i>	23 (29.1)	20 (27.4)	3 (50.0)	
<i>2009-2017</i>	28 (35.4)	27 (37.0)	1 (16.7)	
<i>No ART Record Start</i>	10 (12.7)	10 (13.7)	0 (0.0)	
<b>Time from ART to surgery</b>	3.2 (0.6,6.0)	3.3 (0.8,6.2)	0.7 (0.1,2.1)	0.115
<b>CD4 at ART (cells/ul)</b>	421.0 (301.0,515.0)	413.0 (289.0,506.0)	543.0 (399.0,628.0)	0.0841
<b>VL at ART (log10 copies/ml)</b>	4.5 (3.8,4.9)	4.5 (3.8,4.9)	4.3 (3.3,4.6)	0.5771
<b>History of AIDS</b>				0.0219
<i>No</i>	77 (97.5)	72 (98.6)	5 (83.3)	
<i>Yes</i>	2 (2.5)	1 (1.4)	1 (16.7)	
<b>Year of surgery</b>				0.0508
<i>1997-2000</i>	7 (8.9)	6 (8.2)	1 (16.7)	
<i>2001-2005</i>	17 (21.5)	16 (21.9)	1 (16.7)	
<i>2006-2010</i>	20 (25.3)	16 (21.9)	4 (66.7)	
<i>2011-2016</i>	35 (44.3)	35 (47.9)	0 (0.0)	
<b>Type of Surgery</b>				0.0206
<i>Lasik</i>	23 (29.1)	23 (31.5)	0 (0.0)	
<i>PRK</i>	53 (67.1)	48 (65.8)	5 (83.3)	
<i>RK</i>	2 (2.5)	1 (1.4)	1 (16.7)	
<i>Astigmatic Correction</i>	1 (1.3)	1 (1.4)	0 (0.0)	

<b>CD4 at surgery (cells/ul)</b>	624.0 (446.0,744.0)	623.0 (458.0,754.0)	658.0 (416.0,675.0)	NR*
<b>VL at surgery (log10 copies/ml)</b>	1.7 (1.3,3.4)	1.7 (1.3,3.4)	3.3 (2.6,3.8)	NR*
<b>ART status at surgery</b>				NR*
<i>Yes</i>	50 (63.3)	47 (64.4)	3 (50.0)	
<i>No</i>	29 (36.7)	26 (35.6)	3 (50.0)	
<b>ART Therapy by class surgery</b>				NR*
<i>Boosted PI</i>	3 (6.0)	2 (4.3)	1 (33.3)	
<i>II</i>	8 (16.0)	8 (17.0)	0 (0.0)	
<i>NNRTI</i>	33 (66.0)	32 (68.1)	1 (33.3)	
<i>Unboosted PI</i>	3 (6.0)	2 (4.3)	1 (33.3)	
<b>Diabetes Mellitus Type II at baseline</b>				0.5562
<i>Yes</i>	4 (5.1)	4 (5.5)	0 (0.0)	
<i>No</i>	75 (94.9)	69 (94.5)	6 (100.0)	
<b>Hypertension at baseline</b>				0.7552
<i>Yes</i>	22 (27.8)	20 (27.4)	2 (33.3)	
<i>No</i>	57 (72.2)	53 (72.6)	4 (66.7)	
<b>Hyperlipidemia at baseline</b>				0.7201
<i>Yes</i>	34 (43.0)	31 (42.5)	3 (50.0)	
<i>No</i>	45 (57.0)	42 (57.5)	3 (50.0)	
<b>Tobacco smoking at baseline</b>				0.5171
<i>Yes</i>	50 (72.5)	47 (73.4)	3 (60.0)	
<i>No</i>	19 (27.5)	17 (26.6)	2 (40.0)	

NR\* - not reported due to differing follow-up between groups

Supplemental Table 4. Logistic regression model on risk factors for complications

	Odds ratio	95% confidence intervals		P-value
		Lower	Upper	
Age at surgery, per year	1.05	0.94	1.18	0.4157
<b>Race</b>				
<i>Caucasian</i>	Ref			
<i>African-American</i>	1.11	0.21	5.94	0.9055
<b>Marital status</b>				
<i>Single</i>	Ref			
<i>Married</i>	2.30	0.40	13.39	0.353
<b>Duty Status</b>				
<i>Active Duty</i>	Ref			
<i>Retired</i>	1.55	0.17	14.16	0.7001
Age HIV dx per year	1.06	0.91	1.24	0.4545
CD4 at HIV dx (cells/ul)	1.00	0.99	1.00	0.6508
VL at HIV dx (log10 copies/ml)	1.00	1.00	1.00	0.6335
HIV to surgery, per year	1.05	0.85	1.30	0.6594
Age ART start, per year	1.03	0.92	1.15	0.6452
<b>ART Initiation Era</b>				
1996-2000	Ref			
2001-2008	0.83	0.12	5.61	0.8513
2009-2017	3.38	0.28	40.25	0.3362
CD4 at ART (cells/ul)	1.00	0.99	1.00	0.0868
VL at ART (log10 copies/ml)	1.00	1.00	1.00	0.9668
<b>History of AIDS</b>				
<i>No</i>	Ref			
<i>Yes</i>	0.07	0.00	1.28	0.073
<b>Year of surgery</b>				
1997-2000	Ref			
2001-2005	2.67	0.14	49.76	0.5112
2006-2010	0.67	0.06	7.23	0.7388
<b>Type of Surgery</b>				
PRK	9.60	0.52	178.14	0.1291
RK	Ref			
CD4 at surgery (cells/ul)	1.00	1.00	1.01	0.5006
VL at surgery (log10 copies/ml)	0.55	0.27	1.11	0.0958
<b>ART status at surgery</b>				
<i>No</i>	Ref			
<i>Yes</i>	1.81	0.34	9.61	0.4873
<b>ART Therapy by class at surgery</b>				
<i>NNRTI</i>	Ref			
<i>Boosted PI</i>	0.30	0.03	3.60	0.3424
<i>Unboosted PI</i>	0.70	0.07	7.22	0.7654
<b>Hypertension</b>				
<i>No</i>	Ref			
<i>Yes</i>	0.76	0.13	4.45	0.7557
<b>Hyperlipidemia</b>				
<i>No</i>	Ref			
<i>Yes</i>	0.74	0.14	3.91	0.7209
<b>Smoking</b>				
<i>No</i>	Ref			
<i>Yes</i>	0.54	0.08	3.53	0.5223