

Weight Changes Associated with Patients with High BMI After Initiation or Switching ART Regimen

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BACKGROUND

- Weight gain associated with antiretroviral therapy (ART) use has been documented in several naïve and treatment experienced studies in people with HIV (PWH), however, weight gain in the setting of pre-existing obesity among PWH has not been well defined.

OBJECTIVES

- Describe change in weight, in kilograms, in patients with high BMI after initiation or switching ART regimen over 48 weeks
- Describe change in BMI in patients with high BMI after initiation or switching ART regimen over 48 weeks
- Compare and contrast baseline demographics among ART groups in sample population

METHODS

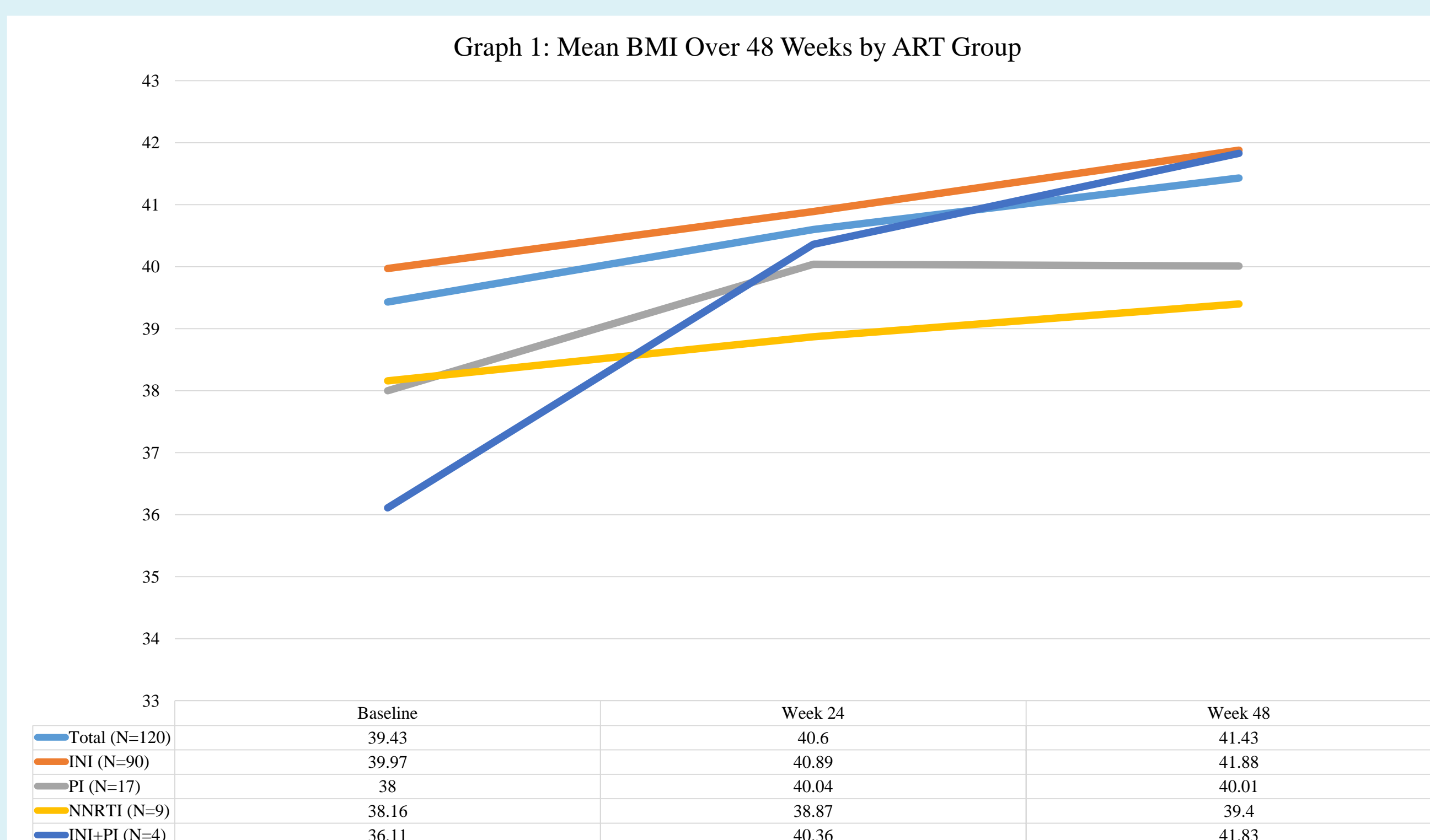
- A retrospective chart review was performed in patients with HIV seen between 2013 and 2018, from a single, underserved clinic with a total patient population of 1,400.
- 241 patients were identified upon initial query of EMR. 149 patients met inclusion criteria of (1) Diagnosis of HIV-1 and (2) BMI greater than or equal to 35 at any point while on ART
- Demographic data, weight and BMI were extracted from the electronic medical record over 48 weeks, from the time of initiation and/or switch of ART regimen.
- 120 patients had complete data throughout the 48 week time period and were included in the final data analysis
- SPSS Version 26.0 was used to describe frequencies, means and medians.
- ART classes were defined as (1) integrase inhibitor (INI) based regimen, (2) protease inhibitor (PI) based regimen, (3) non-nucleoside reverse transcriptase inhibitor (NNRTI) based regimen or (4) INI + PI based regimen

SAMPLE POPULATION

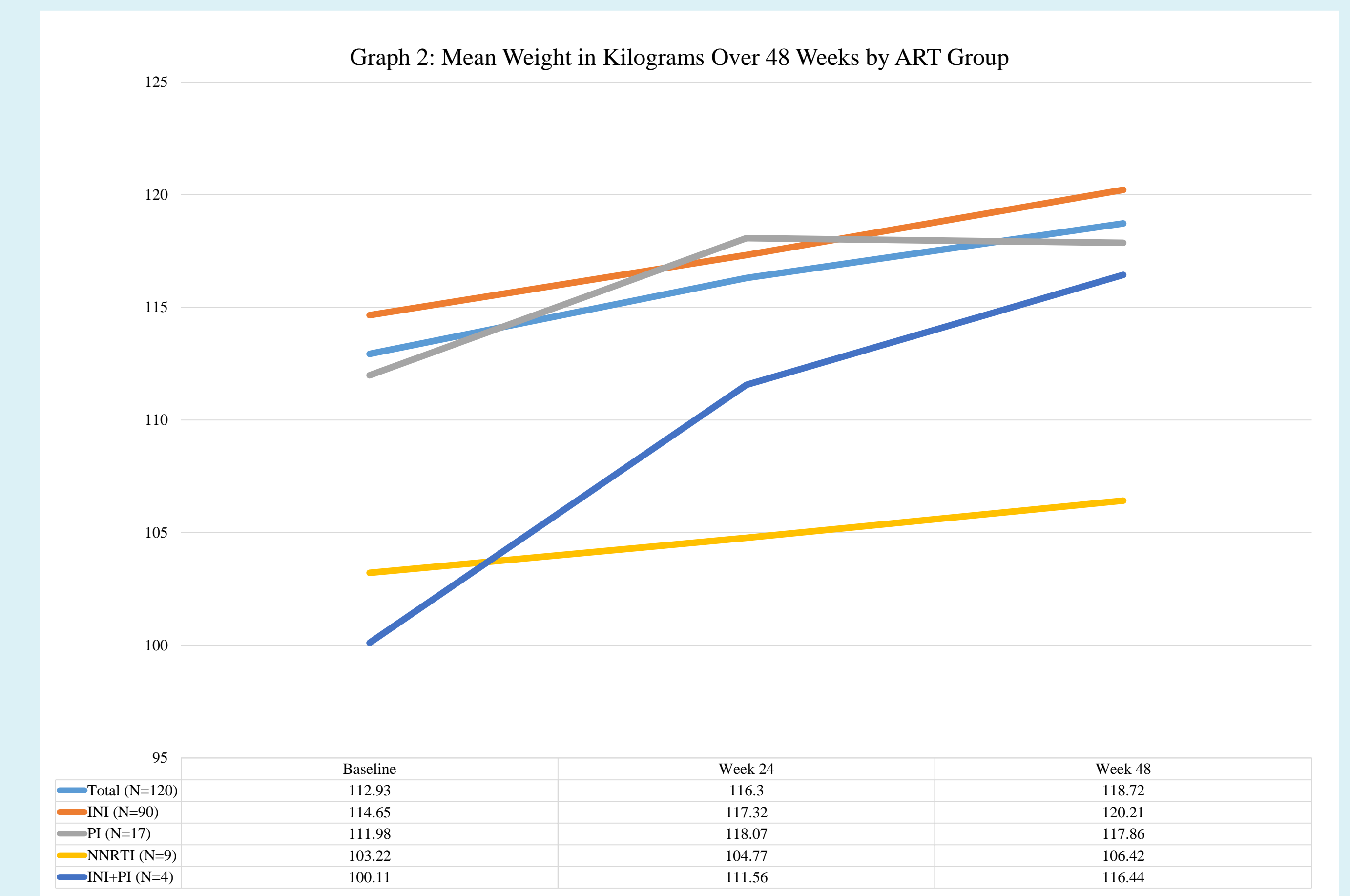
Total Sample Population (N = 120)				
	Frequency	Percent	Mean	Median
Age			46.33	47
Gender: Female	68	56.7%		
Race: Black	90	75%		
Ethnicity: Non-Hispanic	113	94.2%		
Baseline CD4			619.99	594
Tx: Status: Experienced	89	74.2%		
Tx Status: Naïve	31	25.8%		
INI Based Regimen	90	75%		
PI Based Regimen	17	14.2%		
NNRTI Based Regimen	9	7.5%		
INI + PI Based Regimen	4	3.3%		

Baseline Data Based on ART Group				
	INI (N = 90)	PI (N = 17)	NNRTI (N = 9)	INI + PI (N = 4)
Age	46.31 (Mdn = 47)	44.29 (Mdn = 42)	50.33 (Mdn = 48)	46.5 (Mdn = 44.5)
Female	57.8% (52)	52.% (9)	55.6% (5)	50% (2)
Black	76.7% (69)	70.6% (12)	66.7% (6)	75% (3)
Non-Hispanic	95.6% (86)	70.6% (12)	88.9% (8)	50% (2)
Tx Experienced	75.6% (68)	64.7% (11)	88.9% (8)	50% (2)
Baseline BMI	39.97 (Mdn = 38.68)	38 (Mdn = 38.4)	38.2 (Mdn = 34.1)	36.1 (Mdn = 37.3)
Baseline Weight	114.65 (Mdn = 113.47)	111.98 (Mdn = 104.76)	103.22 (Mdn = 100.95)	100.11 (Mdn = 101.13)
Baseline CD4	649.98 (Mdn = 616)	549.53 (Mdn = 593)	617 (Mdn = 743)	223.75 (Mdn = 228.5)

RESULTS



RESULTS



- The overall sample population experienced an mean increase in BMI of 2, PWH on INI based regimen (N=90) BMI increased 1.9, PWH on PI based regimen (N=17) BMI increased 2, PWH on NNRTI based regimen (N=9) BMI increased 1.2 and PWH on INI + PI regimen (N=4) BMI increased 5.7 over the 48 week period (Graph 1)
- 45.8% of PWH experienced at least a 5% increase in weight over 48 weeks
- PWH on an INI based regimen gained an average of 5.6 kg (44.4% experienced at least a 5% increase in weight), PWH on PI based regimen gained an average of 5.9 kg, PWH on NNRTI based regimen gained an average of 3.2 kg and PWH on an INI + PI regimen gained an average of 16.3 kg (Graph 2)

CONCLUSION

- People with high baseline BMI experienced weight gain, regardless of ART regimen
- The greatest weight increase occurred during the first 24 weeks
- Different treatment strategies should be considered in patients with high BMI