

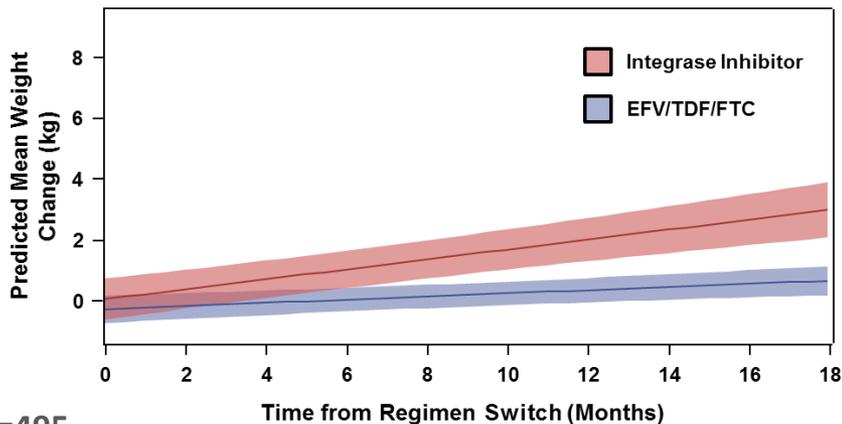
Weight Gain on Integrase Inhibitor-based Antiretroviral Therapy

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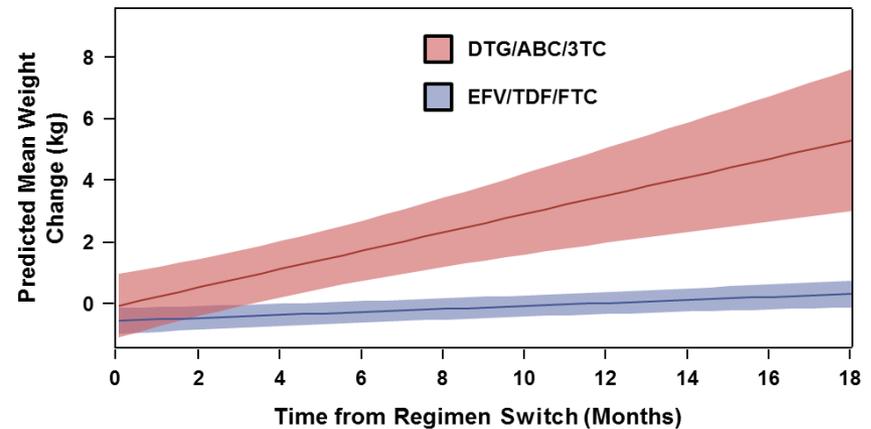
2017: Early Reports of Weight Gain in PWH Switched to Dolutegravir-based Regimens

Integrase inhibitor regimens versus EFV/TDF/FTC



n=495

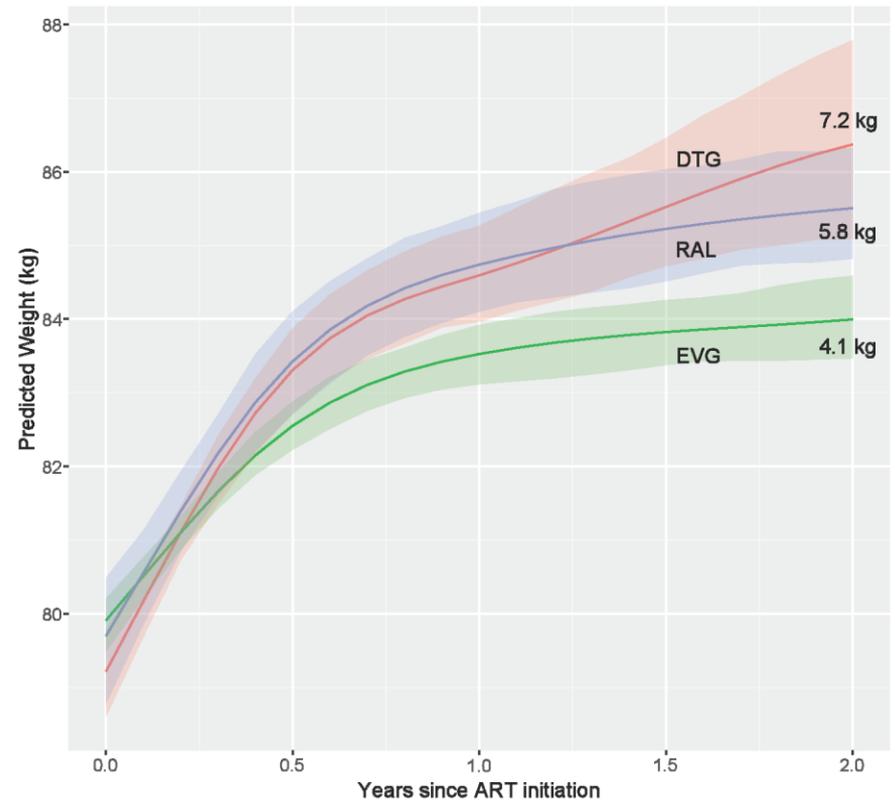
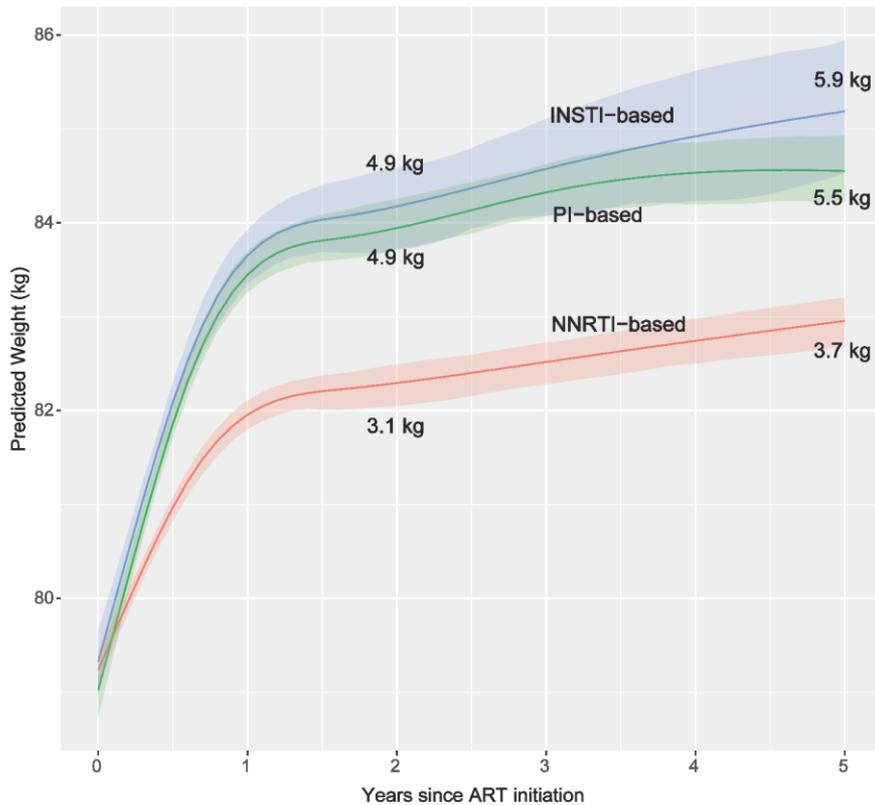
DTG/ABC/3TC versus EFV/TDF/FTC



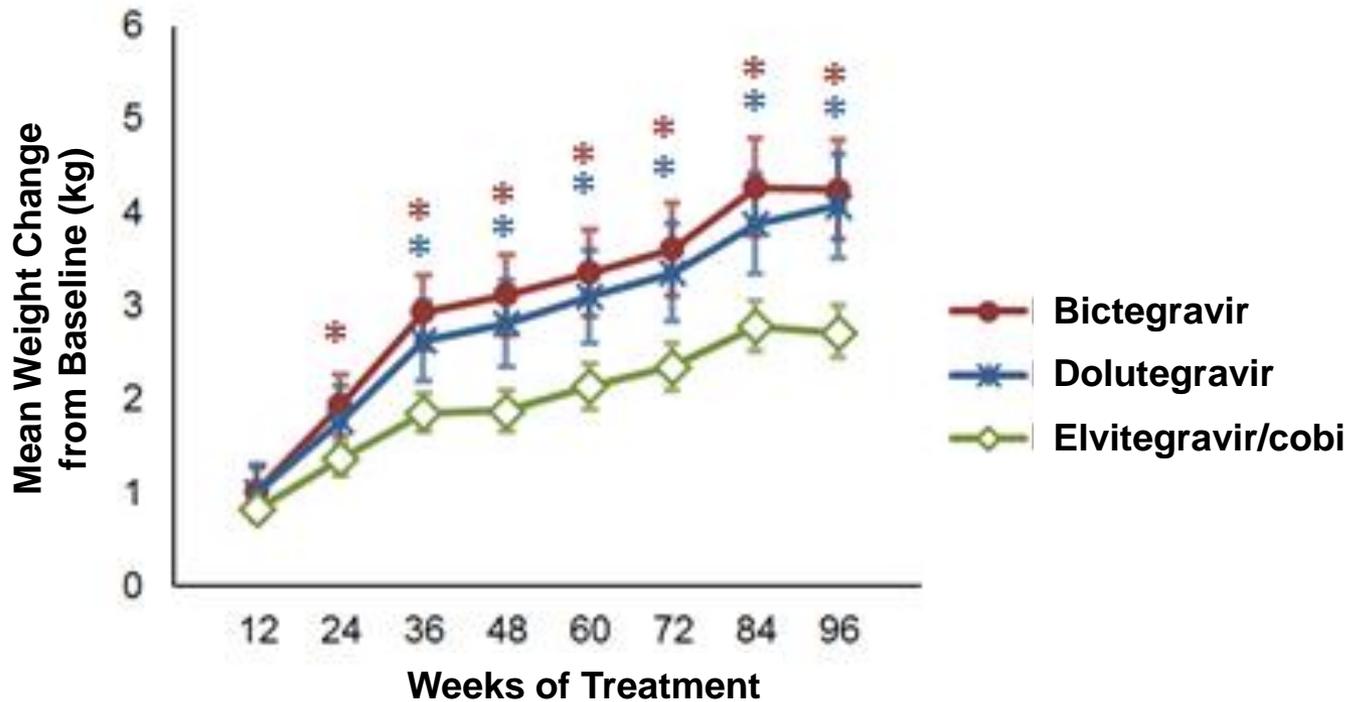
- Adults on Efavirenz (EFV) and Tenofovir Disoproxil Fumarate / Emtricitabine (TDF/FTC) with 2 years of viral suppression switched to an Integrase Inhibitor (INSTI)-based regimen
- Weight gain highest among those switching to Dolutegravir (DTG) with Abacavir/Lamivudine (ABC/3TC)

Weight Gain in Treatment-Naïve Persons Starting ART in North America

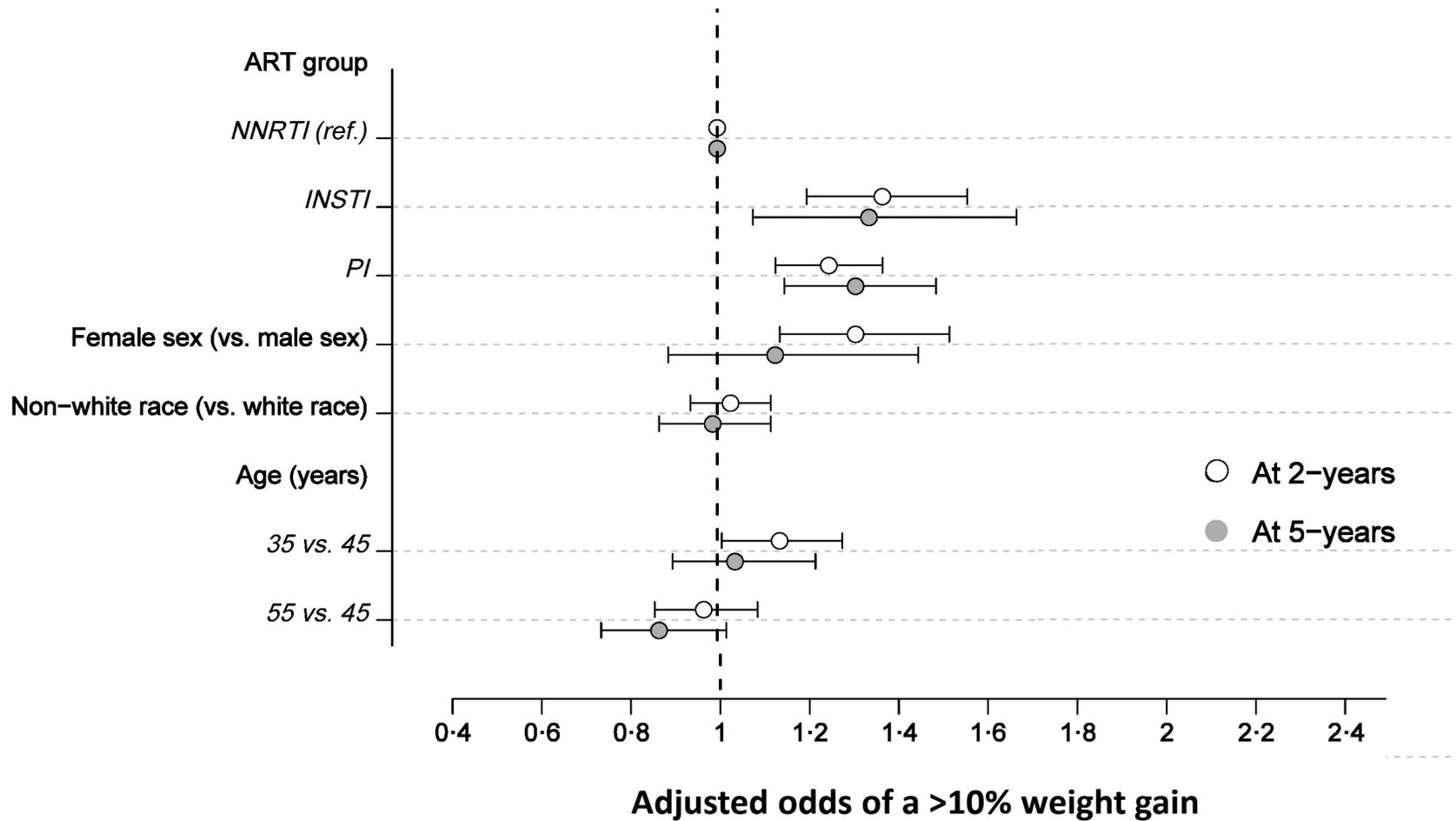
22,972 patients starting ART from 2007-2016 in the US and Canada



Integrase Inhibitors and Weight Gain in Pooled Clinical Trials



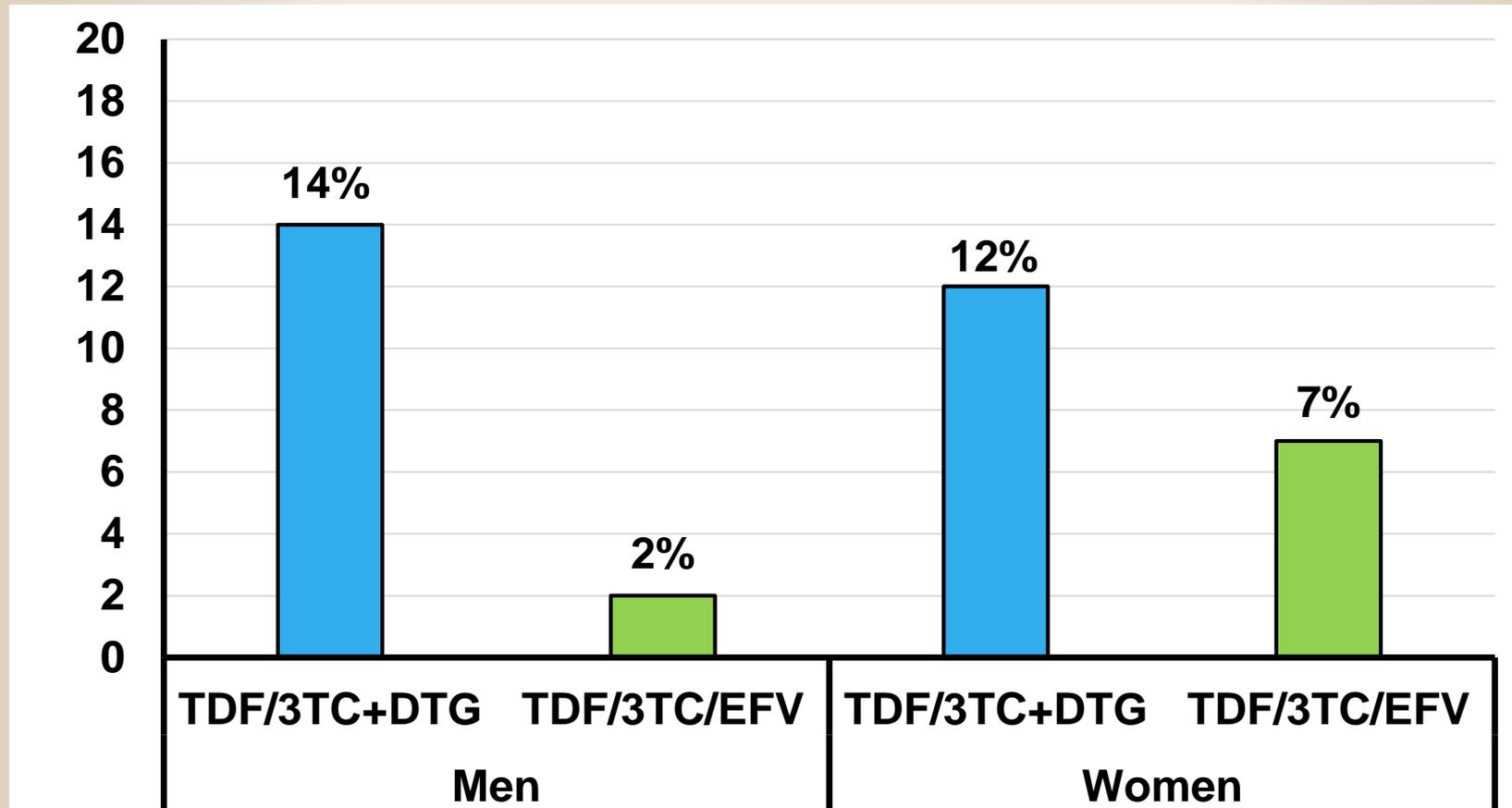
Adjusted Odds of a >10% Weight Gain at 2- and 5-years among PWH in North America



NAMSAL Study – ART naïve PWH starting Dolutegravir vs. Efavirenz with TDF/FTC in Cameroon

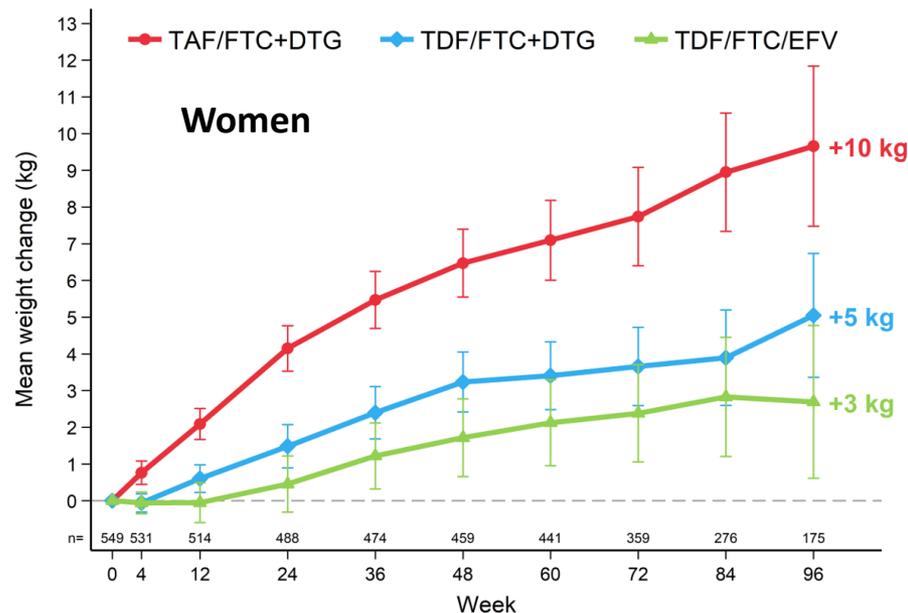
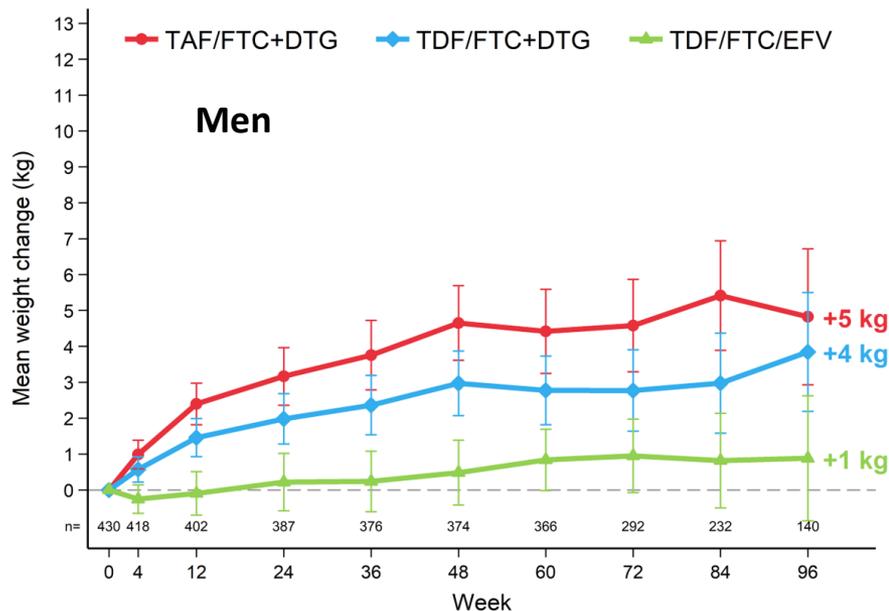
Week 48	DTG+TDF/3TC (n=293)	EFV+TDF/3TC (n=278)	p-value for difference
Mean change from baseline:			
Weight (kg)	+5	+3	<0.001
BMI (kg/m ²)	+1.7	+1.2	<0.001
Treatment-emergent overweight (BMI 25 – 29.9), n (%)	16%	17%	n.s.
Treatment-emergent obesity (BMI ≥ 30), n (%)	12%	5%	<0.01

NAMSAL Study: Treatment Emergent Obesity at 48 weeks

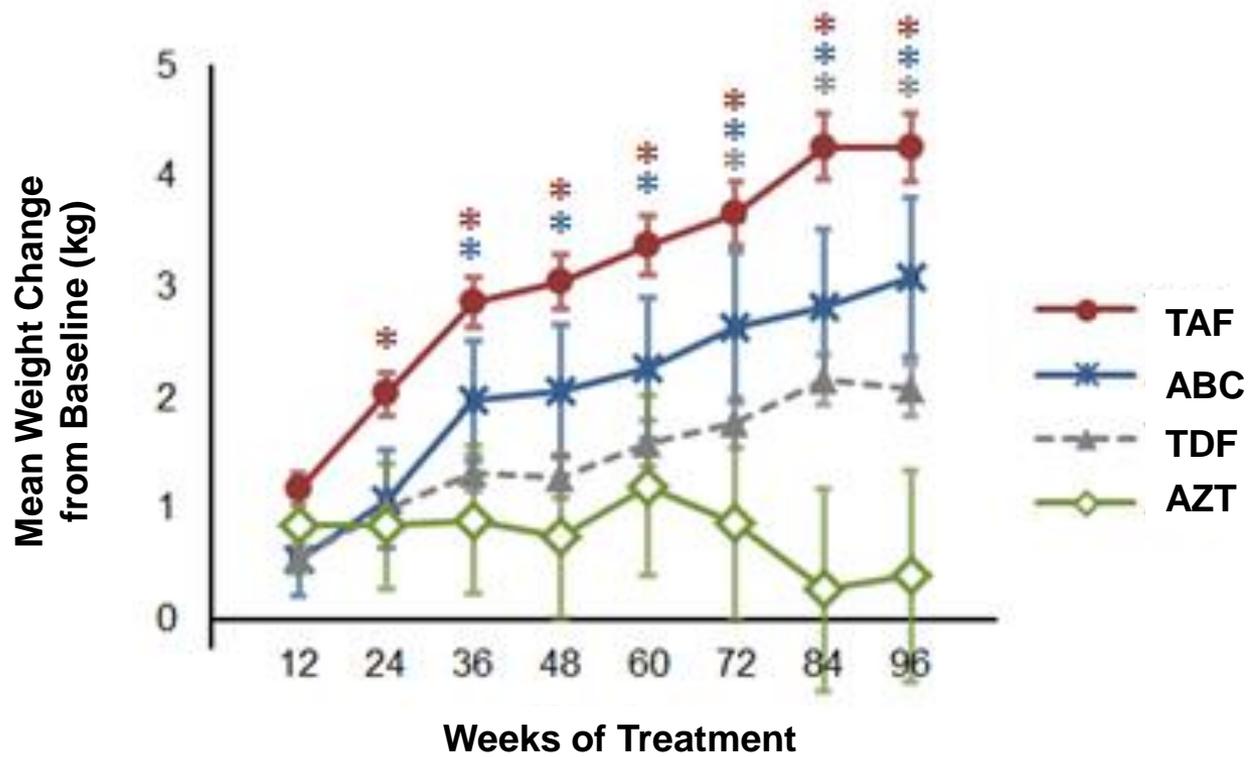


ADVANCE Study: ART naïve PWH starting Dolutegravir + TAF vs. TDF or Efavirenz+TDF in South Africa

Change in weight over 96 weeks by regimen:



NRTIs and Weight Gain in Pooled Clinical Trials



Does Weight Gain Matter?

- Incident diabetes mellitus after ART initiation in North America
- Cox regression adjusted for age, sex, race, HIV transmission risk, year of ART initiation, and baseline weight, CD4+ count, and HIV-1 RNA
- Differences *partially* abrogated when adjusted for 12-month weight change

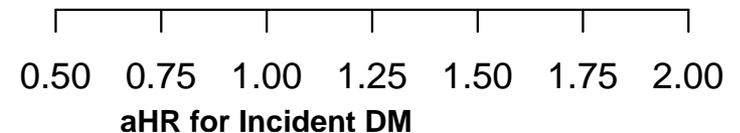
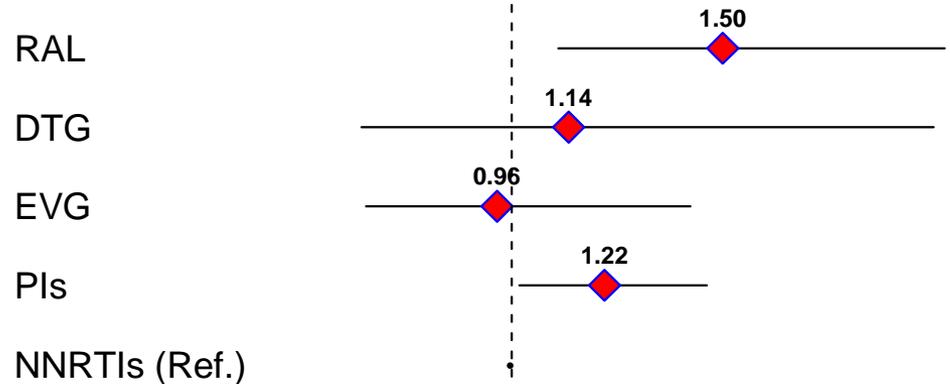
ART

Incident Diabetes Risk

By Class



By Drug



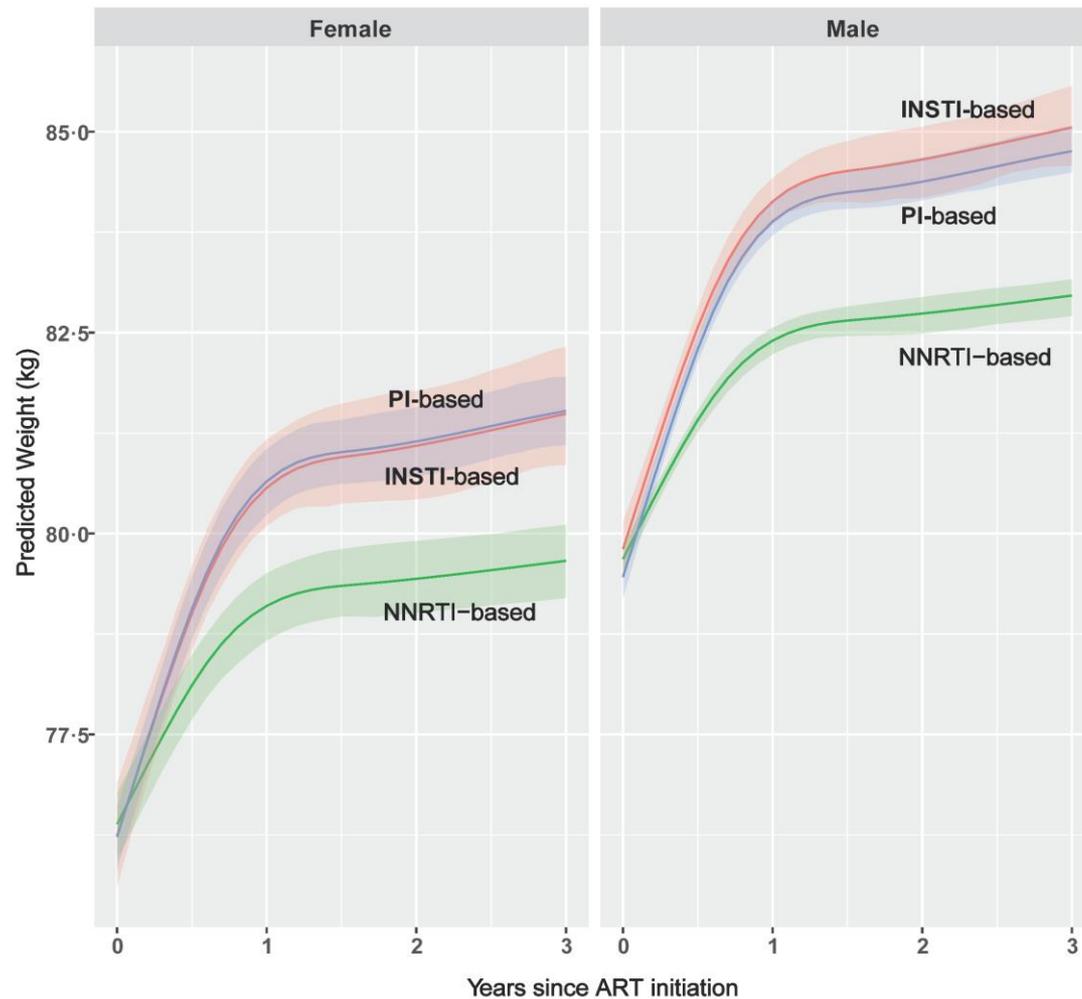
N=21,516

Summary: Integrase Inhibitors and Weight Gain

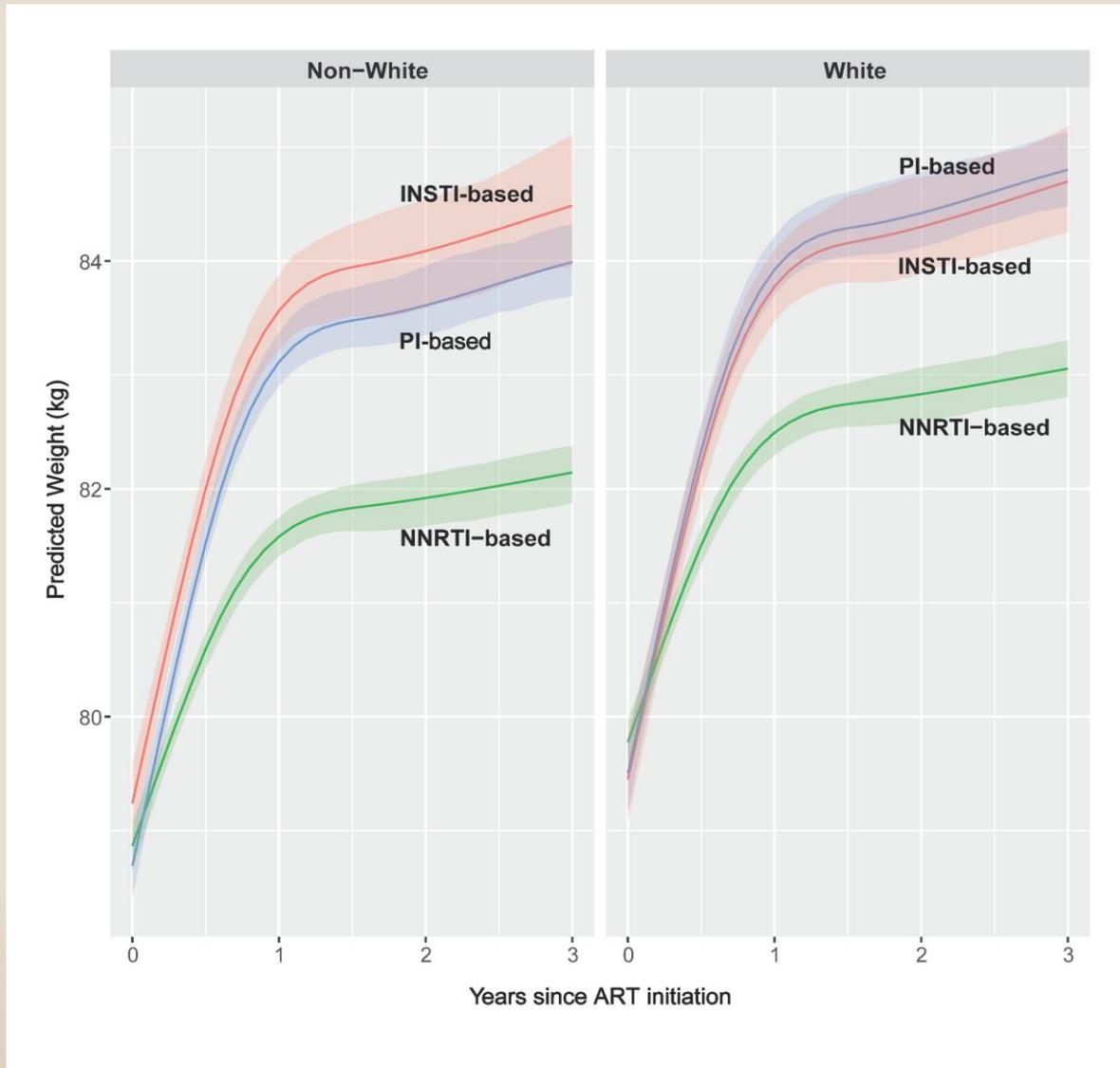
- In a large North American observational cohort study and several clinical trials, PWH starting integrase inhibitor-based regimens, particularly dolutegravir, had greater weight gain
- Women and non-whites seem to be at highest risk of weight gain with integrase inhibitors
- Clinical trials show an independent effect of TAF on weight, which was greatest for women in ADVANCE (South Africa)
- A preliminary North American study showed a higher risk of incidence diabetes with integrase inhibitors; more data are needed from other regions

Supplementary Slides

Weight Gain in Treatment-Naïve Persons Starting ART in North America



Weight Gain in Treatment-Naïve Persons Starting ART in North America



ADVANCE Study: Change in Body Composition Over Time by Regimen:

