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BACKGROUND

- Multiple studies have reported higher weight gain among people with HIV (PWH) with Integrase Strand Transfer Inhibitors (INSTIs), most notably in ART-naïve PWH and among women and Black/African American participants. However, knowledge gaps remain regarding long-term patterns in weight gain beyond the first two years after starting INSTI-based regimens in ART-experienced PWH.

METHODS

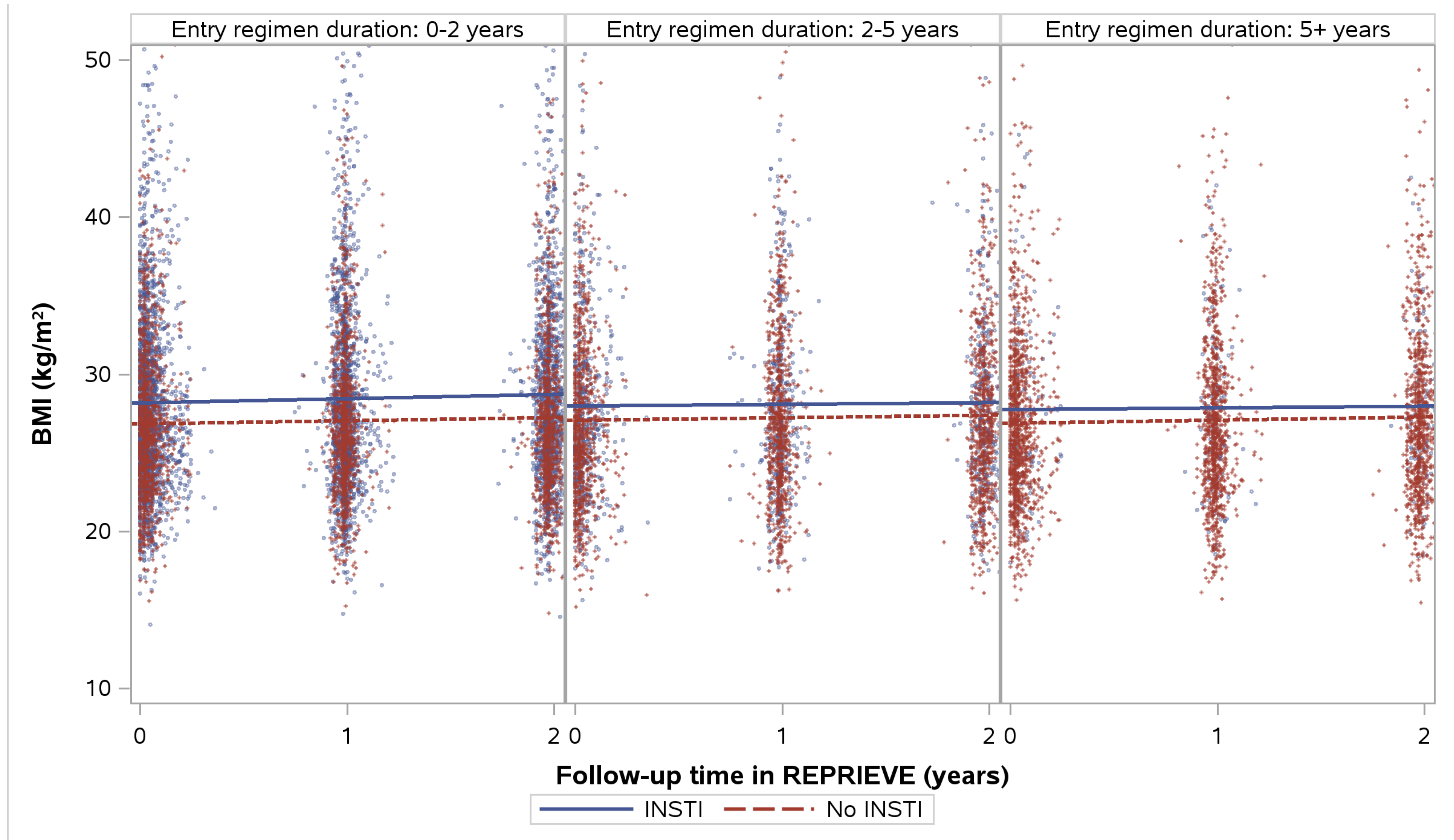
- REPRIEVE (NCT02344290) is a randomized ASCVD prevention trial of PWH between ages 40 and 75 on stable ART.
- Participants enrolled in High Income or Latin America/Caribbean Global Burden of Disease regions with a baseline BMI measure available and who had been on their ART regimen for less than 15 years at study entry were included.
- Mixed effect models with time-on-study as a continuous covariate to evaluate 2-year change in body mass index (BMI) by INSTI status, stratified by duration of entry ART regimen: 0-2 years, 2-5 years, 5+ years.
- Inverse probability treatment (IPT) and inverse probability censoring (IPC) weights were used to account for potential confounding or selection bias in choice of ART-regimen and study-discontinuation over the follow-up period.

RESULTS

- 5475 REPRIEVE participants, including 2493 INSTI users were included.
- Increases in BMI associated with INSTI use over the follow-up period were greatest among those on their entry ART regimen for 2 years or less, females, and Black/African American participants.
- For those on their entry ART regimen for more than 2 years, significant weight gain related to INSTI use was not seen over the follow-up period.
- Results were generally similar accounting for differences in TDF and TAF use.

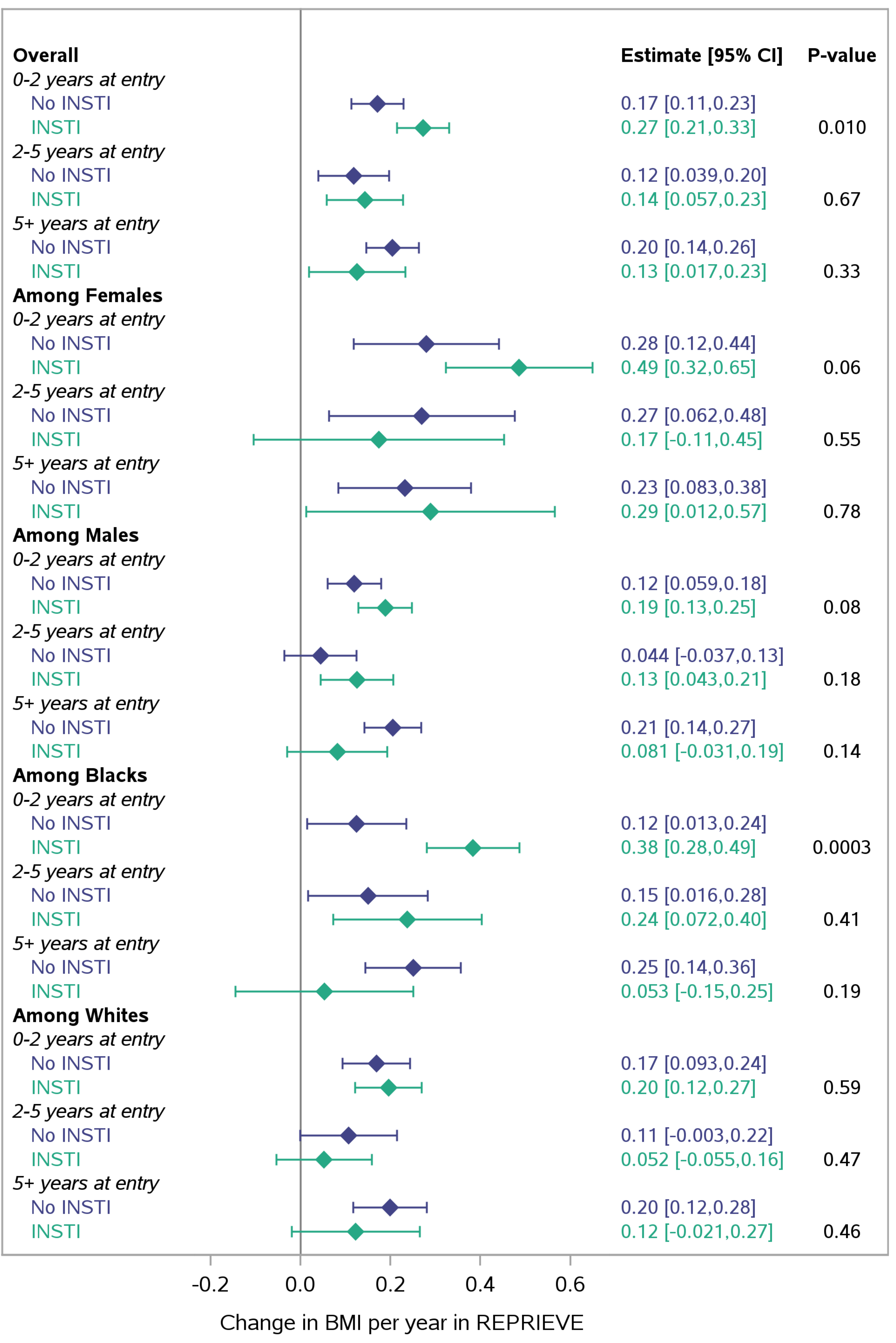
Increase in BMI associated with INSTI use was modest over 2 years of observation in REPRIEVE. Among those on their ART regimen for more than 2 years at study entry, INSTI use was not associated with weight gain over 2 subsequent years of follow up.

Long-term INSTI use may not be associated with substantial ongoing weight gain among PWH, but care should be given to particular subgroups including females and Black/African Americans.



CONCLUSIONS

- Among a multi-national cohort of over 5000 PWH, the average rate of change in BMI attributable to INSTI use was modest over 2 years of observation.
- Even among key subgroups of the population, including female and Black/African American participants, the 2-year change in BMI associated with INSTI use was less than 0.5 kg/m² overall once participants' entry BMI was accounted for.
- Changes in weight over the 2-year follow-up period among long-term users were modest and related primarily to weight at the time of study entry.
- Lack of significant weight change with longer term INSTI use suggests effects on metabolic endpoints may be minimal, but care should be given to assess such changes in particular groups including female and Black/African American individuals.



*P-values represent p-value for 3-way interaction between ART duration, year, and INSTI use



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