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BACKGROUND

- Isoniazid (INH) as tuberculosis (TB) preventive treatment is routinely offered to pregnant women living with HIV (WLHIV) in Kenya. Yet, safety studies of INH use in pregnancy show inconsistent results.
- We evaluated the association between timing of INH initiation and adverse pregnancy outcomes.

METHODS

- We analyzed data from an ongoing safety evaluation observational cohort study enrolling pregnant WLHIV seeking routine antenatal services at 8 clinics in Western Kenya.
- All participants were ≥18 years old and taking dolutegravir (DTG)-based antiretroviral therapy (ART).
- Timing of INH initiation was determined by gestational age and categorised into trimesters: 1st (<14 weeks), 2nd (14 to <28 weeks) and 3rd (≥28 weeks).
- WLHIV who initiated INH prior to pregnancy or who experienced pregnancy loss before 20 weeks gestation were excluded from this analysis.
- Log binomial regression, clustered by facility was used to determine the association between timing of INH initiation and adverse pregnancy outcomes—preterm birth [PTB], small for gestation age [SGA], low birthweight [LBW], and stillbirth [STB] [≥20 weeks], and a composite of any adverse outcomes.

Table 1 . Demographic characteristics (n=261)

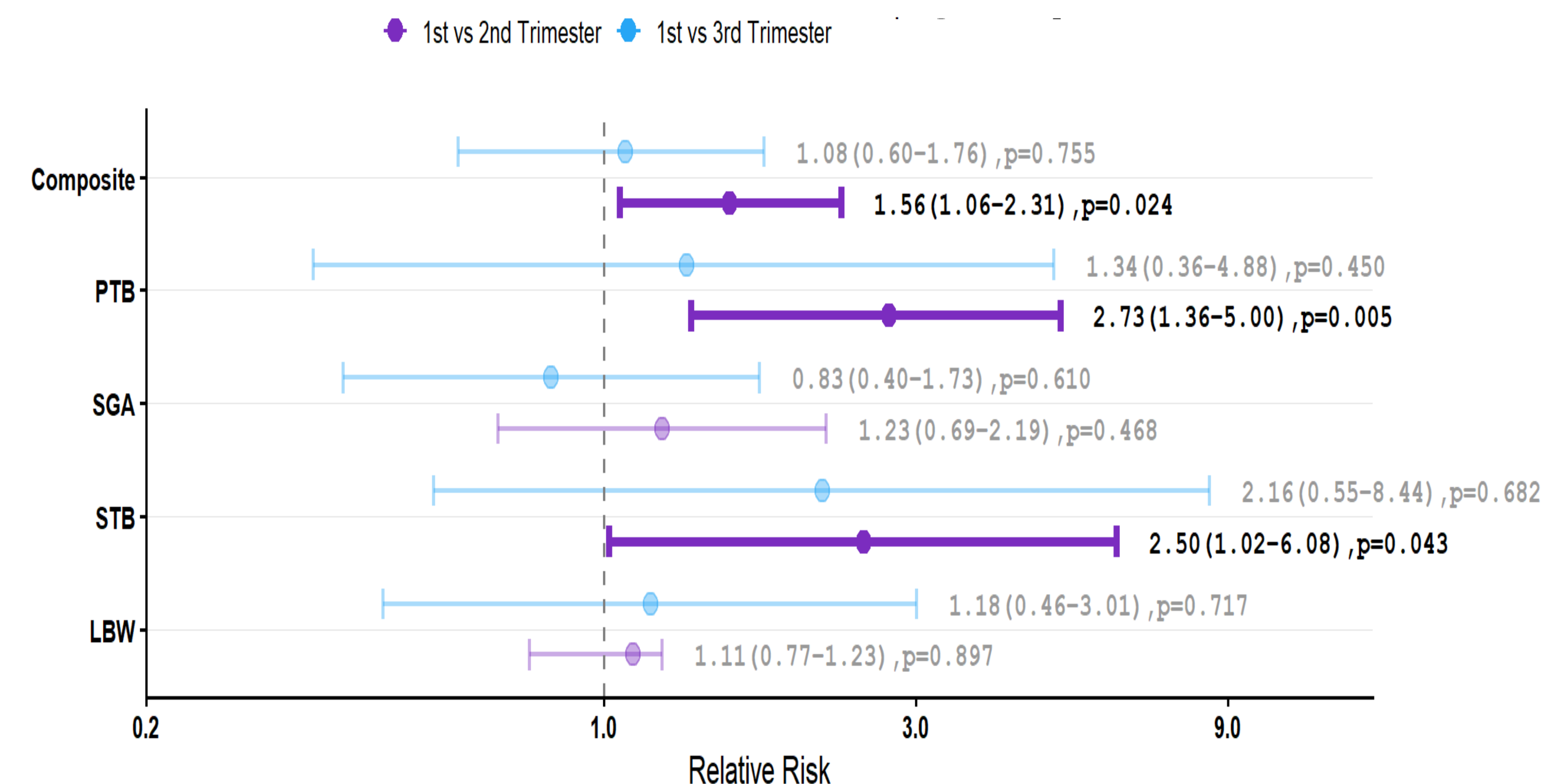
	N (%) or Median (IQR)
Age (years)	26 (23-31)
Gestational age (weeks)	20 (15-26)
Prior pregnancy	19%
Married	82%
Time since HIV diagnosis (months)	1 (0-2)
Time since DTG initiation (months)	1 (0-2)
DTG initiation during pregnancy	98%
Gestational age at INH initiation	16 (12-22)

CONCLUSION

Earlier initiation of INH during pregnancy was associated with higher risk of adverse perinatal outcomes highlighting timing as a key consideration for perinatal INH safety.

RESULTS

Figure 1. Pregnancy outcomes and timing of INH initiation (n=261)



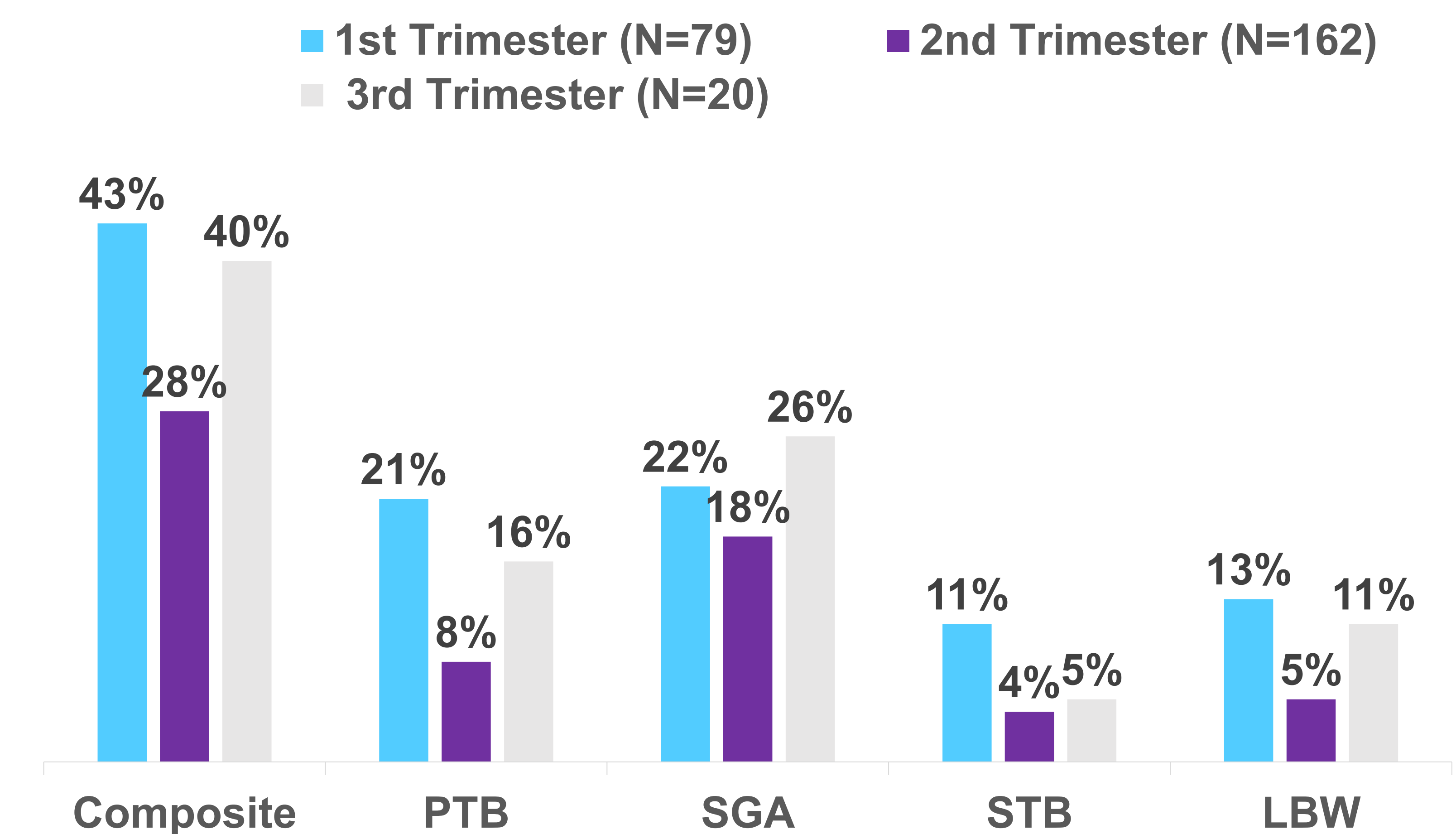
preterm birth [PTB], small for gestation age [SGA], low birthweight [LBW], and stillbirth [STB] ≥20 weeks

Compared to WLHIV who initiated INH in the 2nd trimester, WLHIV initiating INH in the 1st trimester experienced higher frequency of:

- Composite outcome: (43% vs. 28%; RR=1.56, 95% CI: 1.06-2.31, p=0.024);
- Preterm Birth: (21% vs. 8%; RR=2.73, 95% CI: 1.36-5.00, p=0.005), and
- Stillbirth: (11% vs. 4.0%; RR=2.50, 95% CI: 1.02-6.08, p=0.043);
- No association with low birthweight or small for gestational age.

No differences were detected in comparisons with WLHIV initiating INH in the 3rd (n=20) vs. 1st trimester (n=79), though statistical power was limited.

Figure 2. Pregnancy outcomes and timing of INH initiation (n=261)



SUMMARY

- First-trimester INH initiation was associated with higher risk of preterm birth and stillbirth compared with second-trimester initiation among WLHIV on DTG-based ART.
- Comparisons with third-trimester initiation were limited by small sample size

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