Introduction
• Clinical trials have shown dolutegravir (DTG) + lamivudine (3TC) to be an efficacious, well-tolerated and durable regimen for therapy-naive people living with HIV (PLHIV). 1
• DTG+3TC is recommended by major regional and international guidelines as a switch strategy for therapy-experienced patients. 2

Heterogeneity
• There is an update of previously published analyses to include more recently published data. 3

Objective
• The objective of this project was to identify published real-world evidence (RWE) for DTG+3TC in PLHIV and conduct a meta-analysis to estimate effectiveness and tolerability of DTG+3TC in PLHIV by combining RWE from clinical practice

Methods
• Systematic literature review of PubMed and Embase along with 24 regional and international conferences conducted between January 2013 and August 2021 to identify RWE studies of DTG+3TC in PLHIV
• Eligible articles published presenting outcomes of interest for therapy-experienced (supressed and non-supressed at switch) and therapy-naive PLHIV were identified, and data were extracted. Not all studies would be included if contributing >1 endpoint at timepoint of interest. Therefore, differences in studies and populations included in each analysis may differ
• Meta-analysis primary outcome: proportion of patients with virological suppression (>50 copies/mL) at week 48 (W48) and week 96 (W96). Secondary outcomes: virological failure and discontinuations at W48 and W96
• One-arm meta-analysis was used to estimate effect sizes for (a) virological suppression (ITT-E population - virological failure - discontinuations) and on-treatment analysis, (b) virological failure (defined as 100 copies/mL in two consecutive measurements or >1000 copies/mL in a single measurement), and (c) discontinuations from DTG+3TC
• Based on the information available in the publications, studies including duplicate patient populations were removed to avoid double counting of PLHIV
• The endpoint estimates were calculated using fixed-effects and random-effects models, and the model which included the best fit was reported. The studies were weighted according to the inverse of variance estimates, with the best fit was reported. The studies were weighted according to the inverse of variance estimates, which included inter and intra study variance. Forest plots were constructed to report the effect size and 95% confidence intervals (CI) for each study, as well as overall estimated summary effect size and 95% CI for each outcome variable
• The heterogeneity among the studies was assessed using the P (inconsistency) statistic. A low P value (<0.05) would provide statistical evidence of heterogeneity among studies and indicate a random effects model is more appropriate than fixed effects
• For further information on methods please refer to previous reporting. 3

Results
• Systematic literature review: A total of 89 RWE studies, comprising >5,000 PLHIV using DTG+3TC in a real-world setting, were identified
• The studies included >200 ART-naive PLHIV reporting effectiveness in total

Conclusion
• This study comprehended results from over 5,000 PLHIV using DTG+3TC in a real-world setting which are available including >200 therapy-naive PLHIV reporting effectiveness outcomes
• DTG+3TC is an effective, tolerable and durable antiretroviral regimen with low rates of discontinuation in therapy-naive and -experienced PLHIV in clinical practice
• In studies with baseline resistance testing, no cases of treatment-emergent resistance reported in therapy-naive and -experienced PLHIV in clinical practice
• These results support findings from phase 3 clinical trials both in therapy-naive and -experienced PLHIV
• High rates of effectiveness, long-term durability (RWE reporting up to 5 years), low rates of discontinuations, high barrier to resistance