### ABSTRACT

In-class switching to dolutegravir (DTG) among patients who had viral suppression on raltegravir (RAL) was safe and effective. Overall and stratified by switch, there were no differences in virologic failure rates between patients who switched to DTG and those who remained on RAL. Although patients who switched to DTG were more likely to be male, Hispanic, and have a record of prior treatment failure, these results were unchanged in numerous sensitivity analyses. These results support in-class switching to DTG in a real-world setting.

### METHODS

Study Population/Design

The study population was selected from the (International Phenomenon Epidemiology Research and Analysis [IPERA], Inc.) cohort, which includes all patients who have received at least one visit to one of its US-based practices since 2000. Patients included were those for whom their records have been collected in the IPERA cohort and a part of the IPERA cohort containing these patients were identified. Patients become eligible for inclusion in the analysis if they have a stable suppression, defined as a consecutive viral load of 20 copies/mL or less, isolated a total of 15 days over 36 months.

Statistical Analysis

Data were analyzed using the statistical software R (version 3.1.0). The primary endpoint of this study was virologic failure, defined as a single viral load measurement >200 copies/mL. The patients continuing on RAL were similar to those switching to DTG except they were more likely to be male, Hispanic, and have a record of prior treatment failure. These results were unchanged in numerous sensitivity analyses.

### DISCUSSION

In-class switching to achieve greater adherence through simpler, less frequent regimens is an acceptable treatment strategy. [1] This study sought to evaluate the risk of viral breakthrough upon switching from one INSTI to another INSTI in a population of stable suppressed patients. Using data from the IPERA longitudinal database, we statistically significant difference in risk of viral failure was observed in patients who maintained a RAL-containing regimen versus those who switched to a DTG-containing regimen. These results were unchanged after adjusting for confounders. The patients continuing on an INSTI were similar to those switching to DTG except they were more likely to have AIDS, and lower CD4 count and lower viral load at entry. Patients switching from an INSTI to RAL had longer durations of treatment than those who remained on an INSTI. Patients with longer durations of use may have had lower baseline viral load that may have had an impact on our findings. We observed that the risk of virologic failure was similar among patients who switched to DTG and those who remained on RAL.

### REFERENCES


### ACKNOWLEDGMENTS

The authors thank the patients who participated in the study. Dr. Hoefs held stock in Epividian, Inc., Libertyville, IL; Dr. Laven held stock in Epividian, Inc., Libertyville, IL. The patients continuing on an INSTI were similar to those switching to DTG except they were more likely to have AIDS, and lower CD4 count and lower viral load at entry. Patients switching from an INSTI to RAL had longer durations of treatment than those who remained on an INSTI. Patients with longer durations of use may have had lower baseline viral load that may have had an impact on our findings. We observed that the risk of virologic failure was similar among patients who switched to DTG and those who remained on RAL.

### SUPPORT

This research was funded by ViiV Healthcare.