Conclusion. Unlike the CDC data which showed the overall prevalence of INSTI RAM transmission rates during 2013-2016 to be 0.8%, our data suggests a higher rate of INSTI RAMs (14.6%) with overall ART RAM transmission of 39.6%. This increase in baseline resistance to the INSTI class, which occurred over time, mimics the historical development of RAMs seen in the earlier ART classes. Though suboptimal adherence in the population promotes development of RAMs, increased frequency of INSTI RAMs may be due to a lower barrier to resistance of first generation INSTIs. Should our observed trend continue, routine baseline INSTI resistance testing may need to be considered prior to ART initiation.

Disclosures. Cheryl Newman, MD, Gilead (Scientific Research Study Investigator) GSK/ViiV (Scientific Research Study Investigator, Advisor or Review Panel member, Speaker's Bureau) Jansen (Scientific Research Study Investigator) Merck (Scientific Research Study Investigator)

897. Trends and Correlation of HIV-1 Reservoir in Acute HIV Infection and Chronic HIV Infection in China
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Session: P-51. HIV: Treatment
Background. Among acute HIV infection ( AHI ) and chronic HIV infection ( CHI ) , the association of HIV-1 DNA and HIV-1 RNA is currently a hot spot of concern. We studied HIV-1 DNA levels in patients with AHI and CHI before initiation of ART to explore the growth characteristics of the HIV reservoir.

Methods. From 2016/10/31 to 2020/11/23, 97 patients were enrolled in the first hospital of Changsha in China. According to the patient’s epidemiological history, HIV-1 antibody conversion time, presence of opportunistic infection ( OI ) , to determine whether the patients were in the acute or chronic infection period, and divided into two arms: AHI and CHI. Lleukomonocyte, HIV-1 RNA, and CD4/8 of all patients were collected. The HIV-1 DNA in peripheral blood monocytes (PBMCs) was analyzed by SS0 2.20 and GraphPad Prism 8.0. P-value < 0.05 were statistically significant.

Results. 93 of 97 were male and 85 of 97 with sexual transmission. In AHI arm, the mean HIV-1 RNA was 5.15 log10 copies/ml, and the mean of HIV-1 DNA was 2.83 log10 copies/10^6 PBMCs. In CHI Arm, the mean value of HIV-1 RNA was 4.90 log10 copies/ml, and the mean value of HIV-1 DNA was 3.19 log10 copies/10^6 PBMCs. The HIV-1 DNA of CHI group was higher than that of AHI group (p = 0.032) , but the HIV-1 RNA of CHI group was lower than that of AHI group (p = 0.183) . There were no significant differences between AHI and CHI in age, sex, body weight, route of infection, ART, other viral infection, leukomonocyte, CD4+ T cell count, CD4+ T cell percentage, CD8+ T cell count, CD8+ T cell percentage and CD4/CD8 ratio (P > 0.05). In Group AHI, HIV-1 DNA was positively correlated with HIV-1 RNA (r = 0.548, p < 0.001), but not in Group CHI (r = 0.14, p > 0.347).

Disclosures. Ghady Haidar, MD, Karays (Grant/Research Support)
undertaken in this population. Eight studies (N=2366 PLHIV) undertaken in Europe at time points of interest in treatment-naive PLHIV, hence no meta-analysis was conducted to estimate effect sizes for outcomes of interest for DTG + 3TC. Respectively. One-arm meta-analyses using the DerSimonian and Laird method were performed. Publication bias and heterogeneity were determined using funnel plots and I² statistics, respectively. Identified and extracted. Identified studies were included if they had an acceptable level of methodologic quality and reported outcomes of interest at time points of interest (not all endpoints/time points were reported by all studies). The meta-analysis of available data from these 8 studies showed that among PLHIV switching to DTG + 3TC treatment, ~95% maintained virologic suppression (per protocol) with ~1% virologic failures on DTG + 3TC at Weeks 48 and 96. Five of the 8 studies reported resistance data. Among participants with baseline resistance testing, no treatment-emergent integrase strand transfer inhibitor resistance mutations were observed.

Table. Meta-analysis results in Treatment-Experienced PLHIV: Proportion with Virologic Failure, Virologic Suppression, and Discontinuations at Weeks 48 and 96

| Week | Virologic Suppression* | All-Cause Discontinuations*** |
|------|------------------------|-----------------------------|
| 48   | 0.90                   | 0.04                        |
| 96   | 0.94                   | 0.12                        |

*Virologic failure = HIV-1 RNA ≥ 400 copies/mL, p<0.001. **Virologic suppression = HIV-1 RNA < 50 copies/mL. ***All-cause discontinuations. Calculated using ITT (Snapshot).

Conclusion. DTG + 3TC is an effective, tolerable and durable antiretroviral regimen for patients with chronic kidney disease (CKD) and end-stage renal disease (ESRD). Although there are no studies proving the efficacy and safety of this regimen for patients with CKD and ESRD, there are a few studies that support the use of dolutegravir in hemodialysis.

Methods. A retrospective chart review was performed on patients who received dolutegravir and rilpivirine from November 2017 to July 2020 in the HIV clinic at SUNY Downstate Medical Center. The primary endpoint was the viral load suppression rate (defined as viral load less than 50 copies/ml) at 6 months of therapy compared to baseline. Secondary outcomes were any reported adverse drug events and the discontinuations of the study medications.

Results. Overall viral load suppression at 6 months was achieved in 31 out of 36 patients (86.1%). 13 out of 14 patients (92.9%) with CrCl greater than or equal to 60 mL/min at baseline achieved viral load suppression at 6 months, whereas 18 out of 22 patients (81.8%) with CrCl under 60 mL/min at baseline achieved viral load suppression at 6 months (p=0.367). With adjustments for age, gender, and the history of Acquired Immunodeficiency Syndrome, the result was still insignificant. One adverse event of headache was reported in the group with baseline CrCl under 60 mL/min. Three cases of discontinuation were observed.

Conclusion. DTG + 3TC is an effective, tolerable and durable antiretroviral regimen for patients with chronic kidney disease (CKD) and end-stage renal disease (ESRD). Although there are no studies proving the efficacy and safety of this regimen for patients with CKD and ESRD, there are a few studies that support the use of dolutegravir in hemodialysis.

899. Use of Dolutegravir/Rilpivirine in Treatment of HIV in PLWH with CKD and ESRD

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Session: P-51. HIV: Treatment

Background. Dolutegravir and rilpivirine is a novel two-drug single-tablet regimen for human immunodeficiency virus (HIV) that does not require dose adjustment in patients with chronic kidney disease (CKD) or end-stage renal disease (ESRD). Although there are no studies proving the efficacy and safety of this regimen for patients with CKD and ESRD, there are a few studies that support the use of dolutegravir in hemodialysis.

Methods. A retrospective chart review was performed on patients who received dolutegravir and rilpivirine from November 2017 to July 2020 in the HIV clinic at SUNY Downstate Medical Center. The primary endpoint was the viral load suppression rate (defined as viral load less than 50 copies/ml) at 6 months of therapy compared to baseline. Secondary outcomes were any reported adverse drug events and the discontinuations of the study medications.

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Figure 3: Patient selection

45 patients screened
4 did not pick up study drug
3 additional HIV regimen
2 - less than 6 months