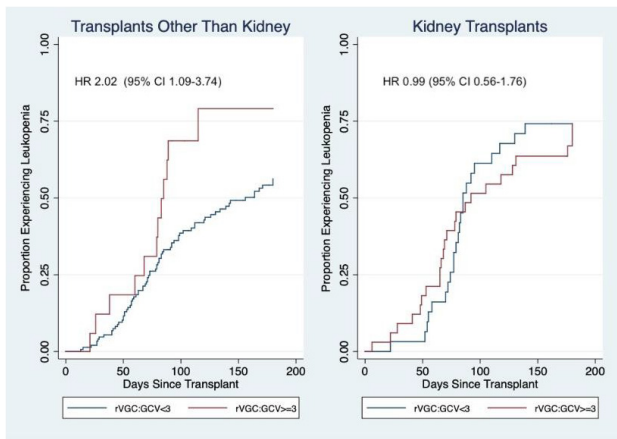


Figure 1



**Conclusion:** Initial doses of VGC used for SOT CMV prophylaxis are estimated to result in significantly higher GCV exposures than IV GCV doses. A relationship with risk of leukopenia was only seen in non-KT patients, possibly because of rapid recovery of renal function and dose adjustment in KT patients.

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#### 1704. Regional and Racial Disparities in Response to Antiretroviral Therapy (ART) among People Living with Human Immunodeficiency Virus (PLWH)

Keith M. Rawlings, MD<sup>1</sup>; Joseph J. Eron, MD<sup>2</sup>; Julie Priest, MSPH<sup>1</sup>; Janna Radtchenko, MBA<sup>3</sup>; Joseph Mrus, MD, MSc<sup>1</sup>; Moti Rampogal, MD<sup>4</sup>; Alan Oglesby, MPH<sup>1</sup>; Faith Fletcher, PhD<sup>5</sup>; Richard A. Elion, MD<sup>3</sup>; ViiV Healthcare, Research Triangle Park, North Carolina; <sup>2</sup>University of North Carolina at Chapel Hill, Chapel Hill, North Carolina; <sup>3</sup>Trio Health, Louisville, Colorado; <sup>4</sup>Midway Immunology and Research Center, Fort Pierce, Florida; <sup>5</sup>University of Alabama at Birmingham School of Public Health, Birmingham, Alabama

**Session:** P-74. Virology: Studies of Treatment and Prevention of Viral Infections

**Background.** This study evaluated differences in viral suppression by race and region among PLWH in care at 10 community practices.

**Methods.** PLWH (≥18 yrs) starting a new ART between Jan'15-Sept'19 with viral load at regimen prescription (Rx) and ≥6 months (mo) of prior history were selected from Trio Health HIV EMR database. Logistic regression [LR] estimated the association of covariates with outcome "viremic" (viral load >50 cells/ml) among those with viral load recorded 12-15 mo after baseline (BSL). Sensitivity analyses were conducted using viral loads at 9-15 mo, in patients (pts) on their BSL regimens for ≥12 mo, and pts with dispensing data. Covariates: BSL suppression, gender, race, age, payer, region (South vs non-South), BSL single vs multi-tablet regimen (STR vs MTR), and switch status from BSL regimen. Multicollinearity was not present.

**Results.** Of 20271 PLWH, 10373 (51%) were treated in South (41% not suppressed at BSL including 30% treatment-naïve [TN]) and 9898 (49%) in non-South (32% not suppressed including 26% TN). The following groups had higher suppression rates at 12-15 mo: males (83%) vs females (80%) p=0.003; white (85%) vs black (78%) and other known race (78%) p< 0.001; insured by commercial or Medicare insurance (both 85%) vs Medicaid (76%) or uninsured (71%) p< 0.001; treated in non-South (88%) vs South (77%) p< 0.001; age ≥50 (87%) vs < 50 (80%) p< 0.001, those who did not switch from BSL regimen (84%) vs switchers (82%) p< 0.001; on STR (84%) vs MTR (81%) p< 0.001.

In LR, pts less likely to be suppressed at 12-15 mo were: < 50 adjusted odds ratio (aOR)=0.76 (0.67-0.88), unspecified gender vs female aOR=0.51 (0.28-0.92), black vs white aOR=0.65 (0.56-0.74), other race (Asian, etc.) vs white aOR=0.73 (0.59-0.91), insured by Medicaid vs commercially aOR=0.64 (0.50-0.82), uninsured vs commercially insured aOR=0.63 (0.53-0.75), treated in South aOR=0.43 (0.38-0.50), switched from BSL regimen aOR=0.75 (0.66-0.86), on MTR vs STR aOR=0.81 (0.72-0.92), viremic at BSL aOR=0.41 (0.36-0.47). Sensitivity analyses results were similar.

**Conclusion.** Our findings highlighted higher rates of viremia among younger, black or other non-white race, pts treated in the South, on Medicaid or uninsured, on MTR, even after accounting for other characteristics.

**Disclosures.** Keith M. Rawlings, MD, ViiV Healthcare (Employee) Joseph J. Eron, MD, Gilead Sciences (Consultant, Research Grant or Support) Janssen (Consultant, Research Grant or Support) Merck (Consultant) ViiV Healthcare (Consultant, Research Grant or Support) Julie Priest, MSPH, GlaxoSmithKline (Employee, Shareholder) Janna Radtchenko, MBA, Trio Health (Employee) Joseph Mrus, MD, MSc, ViiV

Healthcare (Employee) Moti Rampogal, MD, Gilead Sciences (Consultant, Research Grant or Support, Speaker's Bureau) Janssen (Consultant, Research Grant or Support, Speaker's Bureau) Merck (Consultant, Research Grant or Support) ViiV Healthcare (Consultant, Research Grant or Support, Speaker's Bureau) Alan Oglesby, MPH, ViiV Healthcare (Employee) Richard A. Elion, MD, Gilead Sciences (Advisor or Review Panel member, Research Grant or Support, Speaker's Bureau) Janssen (Speaker's Bureau) Proteus (Research Grant or Support) Trio Health (Employee) ViiV Healthcare (Advisor or Review Panel member, Research Grant or Support)

#### 1705. Treatment of Disseminated Adenovirus with Cidofovir in a Patient with HIV and ESRD

Thomas D. Dieringer, MD<sup>1</sup>; Christine Pham, PharmD, BCIDP<sup>2</sup>; David Goodman-Meza, MD, MAS<sup>3</sup>; <sup>1</sup>University of California Los Angeles, Los Angeles, California; <sup>2</sup>University of California, Los Angeles; David School of Medicine/University of California, Los Angeles, Los Angeles, California; <sup>3</sup>UCLA, Los Angeles, California

**Session:** P-74. Virology: Studies of Treatment and Prevention of Viral Infections

**Background:** Adenovirus is a common cause of upper respiratory infections and gastroenteritis. Severe adenovirus infections and disseminated disease are known to occur in immunocompromised hosts. Cidofovir has been associated with clinical improvement in patients with severe or disseminated disease in which immunosuppression cannot be readily reversed or those unresponsive to supportive care. However, a narrow therapeutic index has limited its clinical use particularly in patients with end-stage renal disease (ESRD).

**Methods:** We present a case of disseminated adenovirus in a well-controlled person living with HIV (PLWHIV) treated successfully with dose-reduced cidofovir in the setting of ESRD on hemodialysis (HD) at the University of California Los Angeles. A literature review was conducted to investigate the treatment of severe adenovirus disease and use of cidofovir in patients with ESRD.

**Results:** Our patient is a 59 year-old woman who presented with fever, non-productive cough, and diarrhea. She is living with HIV/AIDS with virologic control and CD4 count of 470 treated with dose adjusted lamivudine, tenofovir alafenamide, and dolutegravir in the setting of ESRD on HD, chronic hepatitis B, and group I pulmonary hypertension. Her course was complicated by development of multifocal pneumonia with hypoxemic respiratory failure requiring high-flow nasal cannula. Adenovirus PCR was detected in stool, respiratory, and serum samples. Given high risk intubation, dose-reduced cidofovir 0.5 mg/kg weekly was given twice over three weeks with symptomatic improvement, elimination of serum adenovirus DNA, and without development of adverse medication-related effects.

Sixteen primary and review articles were identified discussing adenovirus pathology and treatment. A single pharmacokinetic study outlined a dosing regimen for cidofovir of 0.5 mg/kg weekly which provided comparable serum drug levels in asymptomatic patients with ESRD on HD compared to controls with adequate renal function.

**Conclusion:** This case report illustrates although there is limited data to establish the efficacy and safety of cidofovir for treatment of disseminated adenovirus infections in ESRD patients, dose-reduced cidofovir 0.5 mg/kg weekly while on HD appears to have been effective and well tolerated.

**Disclosures.** All Authors: No reported disclosures

#### 1706. Association between Cytomegalovirus Infection/Disease and Morbidity and Mortality in Kidney Transplantation: A Systematic Literature Review of Observational Studies

Amit D. Raval, PhD<sup>1</sup>; Kristin Kistler, PhD<sup>2</sup>; Yuexin Tang, PhD<sup>3</sup>; Yoshihiko Murata, MD, PhD<sup>1</sup>; David R. Snydman, MD<sup>4</sup>; <sup>1</sup>Merck and Co., Inc., Rahway, New Jersey <sup>2</sup>Evidera, Inc., Waltham, Massachusetts; <sup>3</sup>Merck and Co., Inc, North Wales, Pennsylvania; <sup>4</sup>Tufts Medical Center, Boston, MA

**Session:** P-75. Virology: Studies of the Epidemiology of Viral Infections

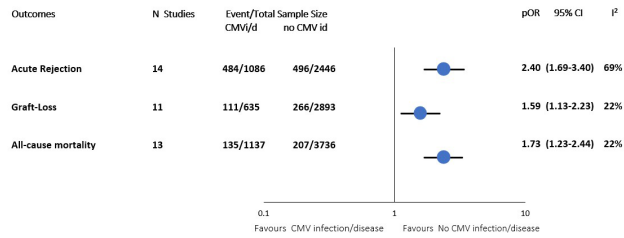
**Background.** Cytomegalovirus (CMV) is a common pathogen in kidney transplant recipients (KTRs). KTRs may develop CMV viremia that is asymptomatic ('CMV infection') or associated with clinical and laboratory findings ('CMV disease') such as fever, leukopenia/neutropenia, and malaise ('CMV syndrome'), and/or evidence of specific organ(s) involvement ('CMV end-organ disease'). The extent to which CMV affects morbidity such as acute rejection (AR), graft loss (GL), other opportunistic infections (OI), or mortality in KTRs has not been systematically evaluated recently. Therefore, we examined the association between CMV infection/disease and morbidity and mortality in KTRs using a systematic review of observational studies from the last decade.

**Methods.** MEDLINE and Embase were searched to identify observational studies published between January 2008 and November 2018 reporting outcomes of interest by CMV status. Meta-analysis was used to derive pooled odds ratios (pOR) with 95% confidence intervals (CIs) using the random-effects models and I<sup>2</sup> statistics to estimate heterogeneity between studies using R version 3.5.1.

**Results.** Of 1,860 retrieved citations, 23 studies with a total of 6,994 KTRs met inclusion criteria. The majority of studies were conducted in Europe (N=14) and included participants regardless of donor/recipient CMV serostatus (N=14).

Included studies reported outcomes by different clinical manifestations of CMV. Overall, CMV infection/disease was associated with an increased odd of AR, with significant heterogeneity. CMV infection/disease was also associated with an increase in the odds of GL and mortality compared to no CMV infection/disease without heterogeneity (Figure 1). A higher rate of all-cause hospital readmission and a greater mean number of OI episodes were reported with CMV infection/disease in a single study.

Pooled Estimates on the Association between Outcomes and CMV Infection/Disease among Individuals Undergoing Kidney Transplant



**Conclusion:** CMV infection/disease was associated with increased mortality and GL in adults with KT. The association between CMV and AR remained similar in direction with high heterogeneity limiting the robustness of the conclusion. Nonetheless, our analysis underscores the importance of interventions to reduce the incidence of CMV infection/disease to reduce mortality and GL in KTRs even in the current era.

**Disclosures.** Amit D. Raval, PhD, Merck and Co., Inc (Employee) Kristin Kistler, PhD, Evidera, Inc. (Employee, Evidera, Inc. received the funding to conduct this study.) Yuexin Tang, PhD, Merck and Co., Inc. (Employee) Yoshihiko Murata, MD, PhD, Merck and Co., Inc. (Employee) David R. Snyderman, MD, Merck (Consultant)Merck (Advisor or Review Panel member)Pfizer (Consultant)Reviral, Anthrax Vaccine, Influenza Vaccine (Other Financial or Material Support, Data Safety Monitoring Board)Takeda/Shire (Advisor or Review Panel member)

### 1707. Clinical Profile of Human T-Lymphotropic Virus Type I Infection in Pediatric Population in a Referral Hospital in Colombia

Juliana Mejia- Mertel, n/a<sup>1</sup>; Juan P. Rojas -Hernandez, Candidate for doctorate in Public Health<sup>2</sup>; <sup>1</sup>Universidad Libre, Cali, Colombia., CALI, Valle del Cauca, Colombia <sup>2</sup>Club Noel Children's Hospital, Cali, Valle del Cauca, Colombia

**Session:** P-75. Virology: Studies of the Epidemiology of Viral Infections

**Background.** The Human T-lymphotropic virus type 1 (HTLV-1), affects around ten to twenty million people worldwide, predominantly in intertropical regions (Africa, Japan, Melanesia, Australia, and South America Pacific Coast). The most common disorders associated are T-cell leukemia/lymphoma (ALT) and HTLV-1-associated myelopathy (HAM). Studies have reported other clinical manifestations in HTLV-1, still studies are needed in pediatric population to improve diagnosis and treatment of infected patients.

**Methods.** Descriptive, retrospective cohort study, conducted in our referral pediatric hospital in Cali, Colombia. Included pediatric patients (1 to 18 years of age) diagnosed with HTLV-1 infection, between January 2017 to March 2020.

**Results.** Twelve patients were included, seven males and five females. Eleven patients were from and resided in the Colombian Pacific coast. Ten patients showed nutritional deficiencies.

None showed clinical or laboratory signs of ALT, neither neurological symptoms or physical exam suggesting HAM. In terms of associated diseases and opportunistic infections, none had a positive HIV ELISA test, and stool tests were all negative for *Strongyloides*. Four presented infective dermatitis, and two showed lesions suggesting scabies.

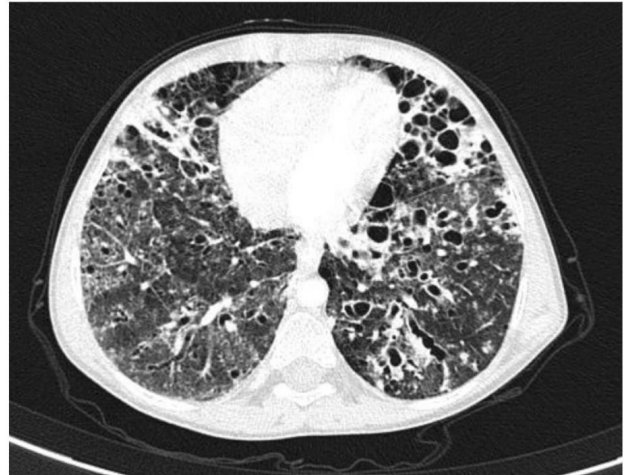
Eight patients presented respiratory symptoms with chest CT scans showing signs of chronic inflammation, bronchiectasis, and subpleural bullae as the major findings. Additional tests were carried out in bronchoalveolar fluid, four had positive galactomannan test, suggesting pulmonary aspergillosis, two exhibited positive gene PCR testing for *Mycobacterium tuberculosis*.

Regarding inflammatory diseases, one patient presented with symptoms of Inflammatory Bowl Disease, with biopsy confirming Crohn's disease. Another patient presented abrupt vision loss, diagnosed with Vogt Koyanagi Hadara Syndrome after ophthalmological evaluation.

### Summary features HTLV-1 patients

Case	Age of diagnosis	Genera	Precedence	Underweight (BMI)	Lung damage	Pulmonary Coinfection	Autoimmunity
1	14 years old	Male	Buenaventura, Valle de Cauca	Yes 14kg/m <sup>2</sup>	Yes	Pulmonary aspergillosis	No
2	8 years old	Female	Mosquera, Nariño	Yes, 11kg/m <sup>2</sup>	Yes	Pulmonary aspergillosis	No
3	10 years old	Female	Buenaventura, Valle del Cauca	Yes 12.9kg/m <sup>2</sup>	Yes	Pulmonary tuberculosis	No
4	8 years old	Male	Buenaventura, Valle del Cauca	Yes 12.4kg/m <sup>2</sup>	Yes	Pulmonary tuberculosis	No
5	16 years old	Male	Timbiquí, Cauca	Yes 14.2kg/m <sup>2</sup>	Yes	None	No
6	6 years old	Female	Buenaventura, Valle del Cauca	Yes 13.2kg/m <sup>2</sup>	No	N/A	No
7	6 years old	Male	Tumaco, Nariño	Yes 13.4kg/m <sup>2</sup>	Yes	None	Crohn's Disease
8	7 years old	Female	Buenaventura, Valle del Cauca	Yes 14kg/m <sup>2</sup>	Yes	Pulmonary aspergillosis	No
9	16 years old	Male	Buenaventura, Valle del Cauca	No 26kg/m <sup>2</sup>	Yes	Pulmonary aspergillosis	No
10	1 years old	Male	Medio San Juan, Chocó	Yes (W/H: -2 SD)	No	N/A	No
11	12 years old	Female	Cali, Valle del Cauca	No 23.4kg/m <sup>2</sup>	No	N/A	Vogt Koyanagi Hadara Syndrome
12	1 years old	Male	Buenaventura, Valle del Cauca	Yes (W/H: -3 SD)	No	N/A	No

Ground-glass opacity diffusely distributed in both lungs with multiple bronchiectasis involving predominantly lung bases. Cystic images diffusely distributed in both lungs, some subpleural and other centrilobular.



**Conclusion:** It is important to consider alternative manifestations of HTLV-1 infection in the pediatric population, including pulmonary disease, opportunistic co-infections, and inflammatory disorders. It is crucial to diagnose this disease in childhood to reach a better control of this neglected infection that affects predominantly vulnerable population in low-income countries.

**Disclosures.** All Authors: No reported disclosures