Background. Key risk factors for tuberculosis (TB) in the United States include HIV-positive status, birth outside of the United States, incarceration and homelessness. Despite advances in antiretroviral therapy (ART) and declining HIV-TB comorbidity, TB remains an important opportunistic infection for all people living with HIV. Few studies exist which characterize HIV-TB co-infection in geographic populations within the United States In this study, we cross-reference the HIV and TB registries in Arizona from 1993 through 2016 and compare features of HIV-TB co-infected individuals with HIV-negative TB cases and the broader population living with HIV.

Methods. Case records were identified by cross-referencing two separate databases maintained by the Arizona Department of Health Services, the Report of Verified Case of Tuberculosis (RVCT) and the Enhanced HIV/AIDS Reporting System (eHARS). Data were organized and analyzed in SAS and comparisons evaluated with Pearson chi-square test.

Results. A total of 361 unique cases of HIV-TB co-infection in Arizona were identified during the study period. Annual TB diagnoses in people living with HIV range from 25 (1995) to 7 (2008 and 2016). Significant differences in birth sex and age were observed in HIV-TB co-infections compared with HIV-negative TB cases. Homelessness was more common among people living with HIV (22.6% vs. 9.0%, $\chi^2 = 70.22$, $P < 0.001$). TB disease manifestations differed ($\chi^2 = 159.7604$, $P < 0.001$) and HIV-positive individuals more frequently had concurrent pulmonary and extrapulmonary TB disease. Outcomes of TB treatment were less favorable among individuals living with HIV ($\chi^2 = 45.33$, $P < 0.001$) as more HIV-positive patients failed to complete the full course of TB therapy or died before therapy completion. Finally, among all people living with HIV, our study revealed significant differences in race ($\chi^2 = 243.53$, $P < 0.001$), country of birth ($\chi^2 = 441.88$, $P < 0.001$), HIV transmission risk factors ($\chi^2 = 125.19$, $P < 0.001$), and correctional status ($\chi^2 = 347.90$, $P < 0.001$) for those who had a TB diagnosis.

Conclusion. Our study reveals important trends in HIV-TB comorbidity in Arizona and may inform public health strategies for addressing TB and its burden among people living with HIV.

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

2264. The Burden of Respiratory Viral Illness in HIV-Infected Patients

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Background. Among individuals living with human immunodeficiency virus (HIV), pulmonary complications are the most frequent cause of morbidity and mortality. Although bacterial and fungal pathogens are well-described etiologies of lung disease, the role of respiratory viruses remains poorly understood. We sought to describe the burden of respiratory viral illness in HIV-infected inpatients admitted to our tertiary care center.

Methods. All HIV-infected inpatients from August 2015 to March 2018 were approached if they presented with respiratory symptoms, defined as cough, dyspnea, sore throat, rhinorrhea, wheezing, or stridor. Eighty patients were enrolled. After obtaining informed consent, nasopharyngeal swabs and blood were collected. If the subject underwent bronchoscopy per the treating physician, excess bronchoalveolar lavage (BAL) sample was collected. Demographic and clinical data were recorded for each subject. Multiplex PCR testing of all respiratory samples was performed.

Results. Of the 70 HIV-infected patients that have undergone complete analysis, 23 (33%) tested positive for respiratory viruses. Of these, 11 (48%) were positive for rhinovirus, 3 were positive for influenza A (13%), 2 for parainfluenza 3 (9%), 2 for coronavirus (9%), and one each tested positive for adenovirus, parainfluenza 4, respiratory syncytial virus and influenza B. One patient had co-infection with rhinovirus and human metapneumovirus. Patients infected with a respiratory virus had severe illness as nearly half (10/23; 48%) required intensive care, 5 (22%) required mechanical ventilation, 4 (17%) were discharged to a higher level of care, and 3 (13%) died.

Conclusion. The role of respiratory viruses on the lung health of HIV-infected patients is poorly defined. In this study, respiratory viruses were identified in over a third of HIV-infected inpatients, representing a substantial disease burden. Moreover, these patients demonstrated significant disease severity. Given these findings, there is a need for future studies of viral infections in HIV-infected individuals to elucidate mechanisms of susceptibility to reduce the burden of pulmonary morbidity in this vulnerable population.

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

2265. The Changing Landscape of AIDS Defining CNS Infections in S. Alberta, Canada Over 30 Years

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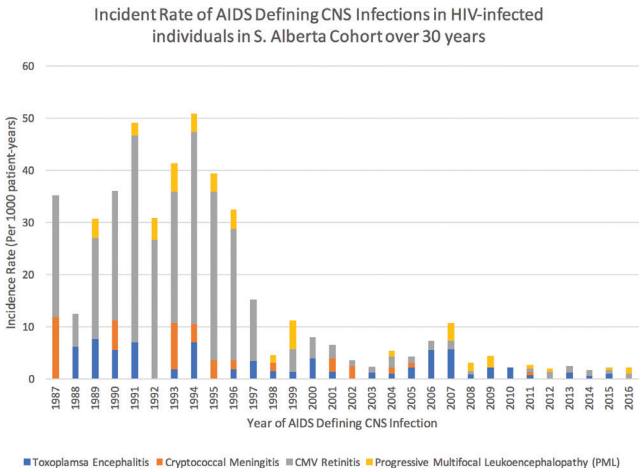
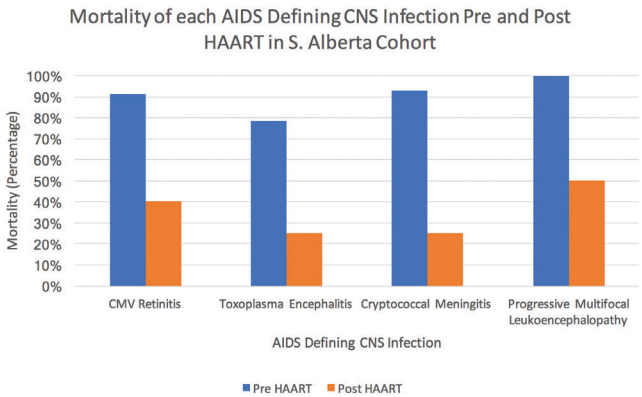
Background. The incidence of AIDS defining CNS infections declined significantly with HAART; however, the longitudinal change in factors and effects of disease has not been well described. We characterized the changing incidence and outcomes in AIDS defining CNS infections over the past 30 years in the geographically defined, well-characterized southern Alberta HIV Cohort (SAC).

Methods. All episodes of cytomegalovirus (CMV) retinitis, progressive multifocal leukoencephalopathy (PML), toxoplasma encephalitis (TE) and cryptococcal meningitis (CM) between January 1, 1987 and January 1, 2017 were identified from the SAC database. Mycobacterium Tuberculosis CNS infections were excluded due to <5 cases. CD4 most proximal to CNS infection and the length of survival to date of death or January 1, 2017 were determined. We compared incidence and outcomes before and after implementation of highly active antiretroviral therapy (HAART), defined as January 1, 1997.

Results. Of the 3,633 patients followed at SAC between January 1, 1987 and December 31, 2016, with 27,776 years of follow-up, 256 cases of AIDS defining CNS infections occurred in 241 individuals including; 150 episodes of CMV retinitis, 50 of TE, 21 of CM and 35 of PML. Two or more concurrent CNS infections were identified in 30 cases. Pre-HAART, the overall incidence rate of CNS infections was 40.5/1,000 patient-years (163 cases), declining to 6.5/1,000 patient-years (53 cases) from 1997 to 2007 and to 3.1/1,000 patient-years (48 cases) after 2007 (Figure 1). CNS infection occurred an average of 52 months (SD: ±49.1 months) following HIV diagnosis. Of note, 14% of CM, 26% of PML and 32% of TE cases were diagnosed within 3 months of HIV. The median CD4 count at diagnosis of CMV retinitis was 19 /mm^3, PML 29 / mm^3, CM 60 /mm^3 and TE 77 /mm^3. Pre-HAART 5-year all-cause mortality for AIDS defining CNS infections was 88.0%; with post-HAART decreasing to 38.7% (Figure 2). Of people who died, survival pre-HAART was 10.4 months and post-HAART was 18.5 months.

Conclusion. With the widespread use of HAART, the incidence of AIDS defining CNS infections decreased more than tenfold leading to a significant decline in all-cause mortality. The survival differences and legacy from functional impairment is currently under further examination.





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2266. Persistent Inflammation in HIV Patients With Community-Acquired Pneumonia and Its Correlation With Lung Injury

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