Table 3. Univariate analysis of variables associated with vaccine uptake

Variable	Odds ratio (95% CI)	P value
Age	0.99 (0.97-1.02)	0.697
Gender Female vs Male	0.72 (0.42-1.24)	0.238
Race Black vs White	1.76 (0.92-3.36)	0.859
Race Other vs White	3.81 (0.50-28.83)	0.308
Distance to transplant center	1 (0.99-1.00)	0.801
Smoking history YES vs NO	0.52 (0.29-0.93)	0.028*
Charlson Comorbidity Index	0.97 (0.87-1.08)	0.578
Insurance BCN vs Medicare	0.58 (0.18-1.83)	0.097
Insurance BCBS vs Medicare	1.47 (0.66+3.29)	0.833
Insurance HAP vs Medicare	6.39 (0.85-47.77)	0.071
Insurance Medicaid vs Medicare	1.07 (0.42-2.68)	0.567
Insurance Other vs Medicare	1.07 (0.39-2.91)	0.606
Liver transplant vs Kidney	0.49 (0.27-0.88)	0.048*
Lung transplant vs Kidney	2.33 (0.53-10.29)	0.146
Multivisceral transplant vs Kidney	0.95 (0.31-2.92)	0.972
Small bowel transplant vs Kidney	0.65 (0.08-5.65)	0.684
HFHS PCP YES vs NO	2.71 (1.45-5.07)	0.002*
PCP visits before transplant	1.54 (1.16-2.05)	0.003*
Transplant visits before transplant	1.13 (1.02-1.27)	0.023*
ID visits before transplant	5.49 (0.74-40.66)	0.096
Hospital admissions before transplant	1.17 (1.00-1.37)	0.049*

Abbreviations: CI, confidence interval; BCN, Blue Care Network; BCBS, Blue Cross Blue Shield; HAP, Health Alliance Plan; HFHS PCP, PCP from Henry Ford Health System. *Represents p-values <0.05.

Table 4. Multivariate analysis of factors associated with vaccine uptake

Variable	Odds ratio (95% CI)	P value
Liver transplant vs Kidney	0.43 (0.23-0.84)	0.056
Lung transplant vs Kidney	2.04 (0.44-9.51)	0.173
Multivisceral transplant vs Kidney	0.69 (0.21-2.32)	0.727
Small bowel transplant vs Kidney	0.65 (0.06-6.74)	0.794
HFHS PCP YES vs NO	2.03 (1.06-3.88)	0.033*
Smoking history YES vs NO	0.54 (0.29-0.98)	0.043*
PCP visits before transplant	1.47 (1.11-1.96)	0.008*
Transplant visits before transplant	1.08 (0.94-1.23)	0.296
Hospital admissions before transplant	1.17 (0.97-1.41)	0.096

Abbreviations: CI, confidence interval; HFHS PCP, PCP from Henry Ford Health System. * Represents p-values <0.05.

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

1756. Role of *Human bocavirus* Respiratory Tract Infection in Hematopoietic Cell Transplant Recipients

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Background. Limited data exist regarding the impact of human bocavirus (BoV) in hematopoietic cell transplant (HCT) recipients. We examined incidence and disease spectrum of BoV respiratory tract infection (RTI) in HCT recipients.

Methods. In a longitudinal surveillance study of viral RTIs among allogeneic HCT recipients, pre-HCT and weekly post-HCT nasal washes and symptom surveys were collected through day 100, then every 3 months, and whenever respiratory symptoms occurred through 1-year post-HCT. Samples were tested by multiplex semi-quantitative PCR for RSV, parainfluenza virus 1–4, influenza A/B, adenovirus, human metapneumovirus, rhinovirus, coronavirus, and BoV. Plasma samples from BoV+ subjects were analyzed by PCR. In addition, we conducted a retrospective review of HCT recipients with BoV detected in bronchoalveolar lavage or lung biopsy.

Results. Among 469 patients in the prospective cohort, 21 distinct BoV RTIs (3 pre-HCT and 18 post-HCT) were observed by 1-year post-HCT in 19 patients (median 42 years old, range 0–67) without apparent seasonality. BoV was more frequently detected in the latter half of the first 100 days post-HCT (Figure 1). The frequencies of respiratory symptoms in patients with BoV detected did not appear to be higher than those without any virus detected, with the exception of watery eyes ($P < 0.01$) (Figure 2). Univariable models among patients with BoV RTI post-HCT showed higher peak viral load in nasal samples ($P = 0.04$) and presence of respiratory copathogens ($P = 0.03$) were associated with presence of respiratory symptoms; however, BoV detection in plasma was not ($P = 0.8$). Retrospective review identified 6 allogeneic HCT recipients (range 1–64 years old) with BoV detected in lower respiratory tract specimens [incidence rate of 0.4% (9/2,385) per sample tested]. Although all 6 cases presented with hypoxemia, 4 had significant respiratory copathogens or concomitant conditions that contributed to respiratory compromise. No death was attributed mainly to BoV lower RTI.

Conclusion. BoV is infrequently detected in respiratory tract in HCT recipients. Our studies did not demonstrate convincing evidence that BoV is a significant pathogen in either upper or lower respiratory tracts. Watery eyes were associated with BoV detection.

Figure 1. Weekly prevalence of Bocavirus post-HCT (5103 sample tested)

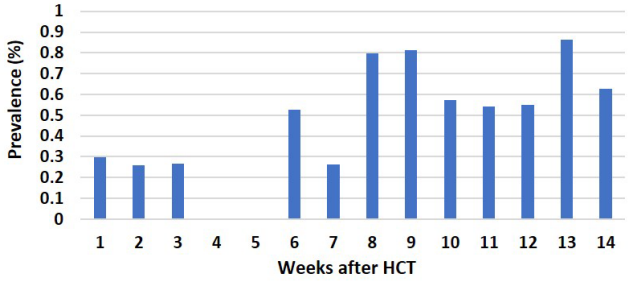
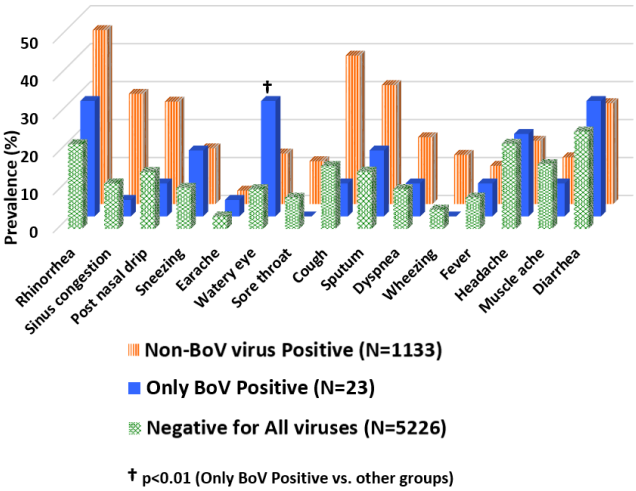


Figure 2. Symptom prevalence by virus detection



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

1757. Hepatitis C-Infected Donors and Hepatitis C-Infected Recipients: Analysis of Renal Transplant Outcomes

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Background. Increased utilization of hepatitis C virus (HCV)-infected organs could reduce the supply–demand mismatch in organ transplantation. It is important to determine precise outcomes of HCV-positive organs transplanted into HCV-positive recipients (HCV D+\R+) to quantify risk for patients and other stakeholders. Small studies have identified shorter wait times in HCV D+\R+ compared with HCV-negative donor and HCV-positive recipients (HCV D−\R+), but there is little information about survival and rejection in the era of effective direct-acting antivirals (DAA).

Methods. We performed a retrospective cohort study of all cases of renal transplantation involving HCV-positive recipients at an academic medical center from 2008 to 2019. We extracted data using the institutional electronic transplant database. Demographics, incidence of organ rejection, renal function and patient mortality data were compared between HCV D+\R+ and HCV D−\R+.

Results. Among 3,781 patients who received a kidney transplant between 2008–19, 139 were HCV D-\R+ and 51 were HCV D+\R+. Both groups had similar waiting list time (1,196 ± 889 days vs. 1,301 ± 1240 days, $P > 0.20$), donor mean age (37 ± 11 y vs. 39 ± 13 years, $P > 0.20$) and sex (female: 37% vs. 42%, $P > 0.20$). Follow-up time was similar between both groups (5.2 ± 4 years vs. 5.3 ± 3 years, $P > 0.20$). The incidence of mortality (16% vs. 17%, $P > 0.20$) [Figure 1] and rejection (18% vs. 19%, $P > 0.20$) [Figure 2] was similar between two groups. Using a Cox Hazards model, we found

no association between HCV D+/R+ and increasing risk of rejection (HR 0.92, 95% CI 0.43–1.95, $P > 0.20$) or mortality (HR 0.93, 95% CI 0.42–2.1, $P > 0.20$). In a multivariate analysis, age was the only independent risk factor for HCV D+/R+ mortality (HR = 1.09, 95% CI 1.03–1.14, $P < 0.001$).

Conclusion. Patients who are HCV-positive did not have worse mortality or graft rejection if they received HCV-positive kidneys compared with HCV-negative kidneys. Providers can use these data to give specific risk information to HCV-positive patients about accepting an HCV-positive kidney for transplant, even perhaps encouraging it. Increasing the utilization of HCV-positive kidneys for transplantation in the era of effective DAA has the potential to offer life-saving treatment to substantially more patients.

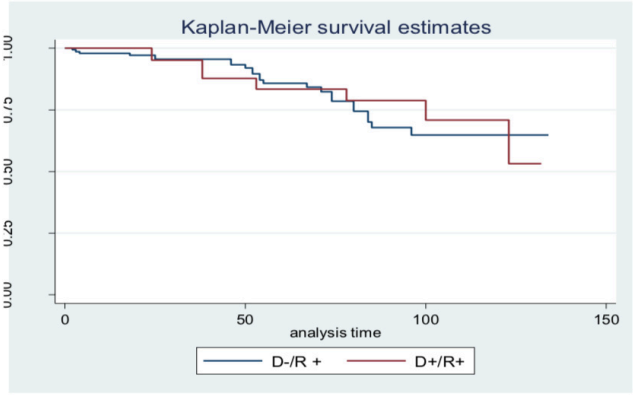

Figure 1. Kaplan-Meier estimates of survival in HCV D-/R+ v HCV D+/R- recipients

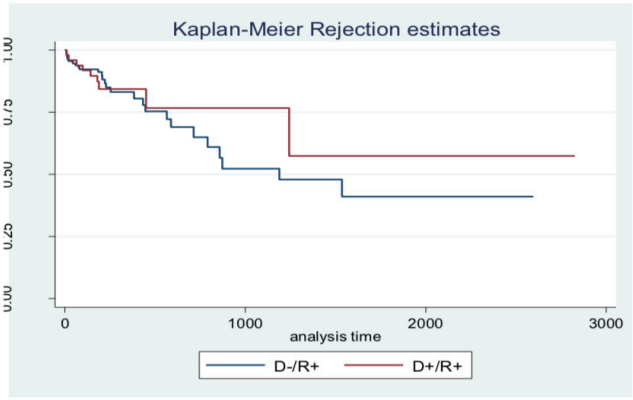

Figure 2. Kaplan-Meier estimates of graft rejection in HCV D-/R+ v HCV D+/R- recipients

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

1758. Epidemiology of Invasive *Mycoplasma* and *Ureaplasma* Infections Early after Lung Transplantation

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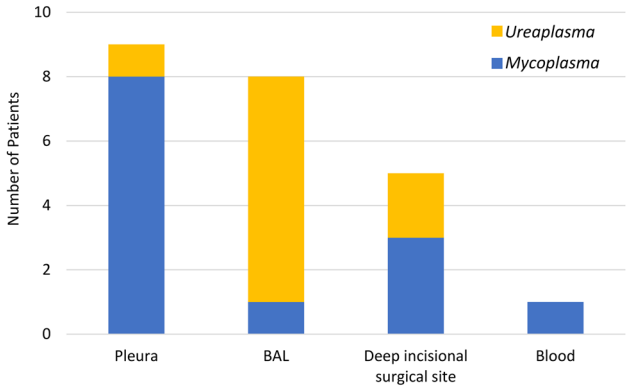
Background. *Mycoplasma* and *Ureaplasma* species can cause invasive infections early after lung transplant that are difficult to diagnose and associated with substantial morbidity, including hyperammonemia syndrome. Data on the epidemiology and clinical outcomes of these infections are needed to inform clinical management and screening protocols for donors and recipients.

Methods. We retrospectively collected clinical data on all patients who underwent lung transplantation at our hospital from January 1, 2010 to April 15, 2019 and subsequently had positive cultures or PCR studies for *M. hominis* or *Ureaplasma* spp. Patients with positive studies from only the genitourinary tract were excluded. We analyzed donor and recipient clinical characteristics, treatment courses, and outcomes for up to 2 years after transplant.

Results. Of 1055 total lung transplant recipients, 20 (1.9%) patients developed invasive infection with *M. hominis* or *Ureaplasma* spp. *M. hominis* caused the first 10 infections (2010–2016), and *Ureaplasma* spp. caused 10 subsequent infections (2017–2019). Date of first positive culture or PCR study occurred a median of only 19 days after transplant (range, 4–90 days). Median donor age was 31 years (range, 18–45 years), and chest imaging for 16 (80%) donors revealed airspace disease compatible with aspiration. Infection outside of the respiratory tract was confirmed for 13 (65%) recipients, including 8 patients with *M. hominis* empyemas (Figure 1). Ten (50%) patients developed altered mental status that was temporally associated with infection; 8 (80%) of these patients had elevated serum ammonia levels, including 3 patients with *M. hominis* infection. Median duration of therapy was 6 weeks (IQR, 4–9 weeks), consisting of combination antimicrobial regimens for nearly all patients. Additional postoperative complications were common, and 11 (55%) patients died within 1 year after transplant (median, 117 days; IQR, 65–255 days) (Figure 2).

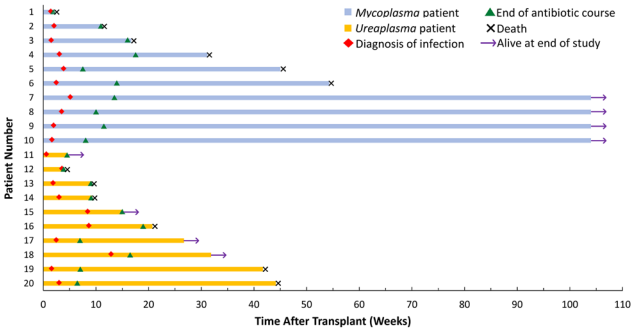
Conclusion. *Ureaplasma* and *M. hominis* infections occurred early after lung transplant and were associated with substantial morbidity and mortality. Transplant clinicians should have low thresholds for performing specific diagnostic testing for these organisms. Protocols for donor and recipient screening and management need to be developed.

Figure 1. Sites of infection among 20 lung transplant recipients who developed invasive infection from *Mycoplasma* or *Ureaplasma.**



*Patients with more than 1 site of infection were included in multiple categories.
BAL, bronchoalveolar lavage.

Figure 2. Clinical courses of 20 lung transplant recipients who developed invasive *Mycoplasma* or *Ureaplasma* infection from 2010-2019.



Disclosures: Rachel Miller, MD, Synexis: Research Grant.

1759. Incidence of Hospitalizations and Emergency Department Visits for Herpes Zoster in Immunocompromised and Immunocompetent Adults in Ontario, Canada, 2002–2016

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Background. Adults with immunocompromising conditions are at increased risk of herpes zoster (HZ) infection and related complications. We aimed to assess the incidence of HZ seen in hospital or emergency department in immunocompromised populations and compare it to that of immunocompetent populations.

Methods. Using healthcare administrative data, we calculated incidence rates (IR) of HZ in Ontario, Canada between April 1, 2002 and August 31, 2016 in adults ≥18 years categorized as immunocompromised or immunocompetent. We repeated these analyses by type of immunocompromising condition and provided incidence rate ratios (IRR) comparing to immunocompetent adults. We also calculated IRs and IRRs of HZ complications by immunocompromised status.