by multiplex PCR. All sequencing was performed on an Illumina MiSeq using 500 cycle v2 Reagent Kits. Reads from the targeted sequencing were aligned to the 25 specific reference target sequences using Bowtie2 while metagenomics reads were processed with the taxonomic sequence classifying software Kraken. For microarray analysis, Lawrence Livermore Microbial Detection Array v2 arrays were hybridized with Cy3-labeled DNA or cDNA. Scanned images of arrays were analyzed by CLiMax 3.1.

**Results.** Eight CSF samples had results positive for well-established causes of ME from prior testing (Table). The pilot study demonstrated none of the four AMT detected all causative agents in the eight CSF samples known to have well-established causes of ME. BioFire and targeted sequencing performed best, both detecting 6/8, metagenomics deep sequencing detected 3/8, and microarray detected 1/8.

**Conclusion.** Despite the sophistication of AMT, they cannot detect pathogens they do not target, that are present in small numbers, or that have been eliminated from the CSF by the immune response. Despite the theoretical potential for microarray and metagenomic sequencing to detect thousands of different agents, the agents probably must be present at high levels for detection.

### Clinical laboratory evaluation

| Cryptococcus spp. | 4 | 3 |
|------------------|---|---|
| Streptococcus pneumoniae | 1 | 1 |
| Enterovirus | 2 | 2 |
| West Nile Virus | 1 | N/A* |

*West Nile Virus is not on the BioFire Panel.

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**130. Does Detection of Respiratory Viral Infection in Upper Respiratory Tract (URT) Predict Lower Respiratory Tract (LRT) Disease in Hematopoietic Cell Transplant (HCT) Patients?**  
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**Background.** HCT recipients are frequently infected with respiratory viruses (RVs) in the URT; however, diagnostic evaluation of the LRT by bronchoalveolar lavage (BAL) is less common. We sought to determine whether the detection of RVs in the URT is predictive of LRT detection and to identify factors that predict discordance between upper and lower RV detection.

**Methods.** HCT recipients with respiratory symptoms and LRT RV testing via multiplex PCR in BAL from July 2009 to October 2016 were included in the study. RV PCR results, including cycle threshold (CT) values, were compared with URT samples obtained within ±3 days. Logistic regression models were used to analyze risk factors for RV discordance between paired samples.

**Results.** Among 1,000 HCT recipients with BAL RV testing, 250 had URT testing within ±3 days. In total, 75(70%) sample pairs were concordant for the same RV in both the URT and BAL (P/P); 132 (53%) were negative from both sites. Among 43 discordant pairs, 25 (10%) were only positive by URT but negative by BAL (P/N) and 18 (7%) were positive by BAL but negative by URT (N/P). In pairs with positive RV results in the URT or BAL, discordance was common for HMPV (44%), HRV (33%), and PIV-3 (28%); RSV was almost always concordant (92%) (Figure 1). In a multivariable model, the risk of discordance (P/N or N/P) was increased in the presence of a solitary nodule on radiography (OR 6.8; 95% CI 1.2–38.3) and with lymphocyte count >500/mm³ (OR 3.1; 95% CI 1.08–9.0). Among P/P pairs, the median difference between CT values in URT and BAL samples was 0 (range –12 to +13), with 33 and 29% of subjects having lower and higher CT values (>4, ~1 log) in the BAL, respectively (Figure 2).

**Conclusion.** In asymptomatic HCT recipients with RV PCR testing performed concurrently in the upper and lower tract, discordant results are relatively common, especially for HRV, HMPV, and PIV-3. The presence of a solitary nodule on imaging and the absence of lymphopenia are associated with discordant results, with BAL results more likely being negative in these situations. More than half of the P/P pairs had a >4 difference in CT values between URT and LRT samples. Taken together, these data suggest that RV testing in BAL can provide useful diagnostic information that may guide management in HCT recipients.

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**131. A Multicenter Study on Clinical Outcomes of Infections within 200 Days of Liver Transplantation among Recipients Age 65 Years and Older**  
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**Background.** Liver transplantation is increasingly performed in patients aged ≥65 years. Per the United Network for Organ Sharing data, infections are the leading primary and contributory cause of death in older liver transplant (LT) recipients. This study aims to describe the epidemiology and outcomes of infections within the first 200 days of LT in older adults.

**Methods.** We performed a retrospective, observational multi-center study of patients aged ≥65 years who underwent primary LT from January 1, 2010 to June 30,
2015. Data collection included patient demographics, co-morbidities, transplant data, infection event in 200 days of LT and death. Severe infection was defined as the presence of sepsis, septic shock, or sepsis with multi-organ failure.

Results. A total of 255 patients met inclusion criteria with median follow-up of 690 days (range 1—2095). The mean age was 67.6 years (SD 2.4). Majority were male (67%) and white (85%). Frequent indications of LT were hepatocellular carcinoma (46%) and hepatitis C (32%). The median MELD score at the time of LT was 22 (range 6—47). Only 3% of recipients received thyroglubulin for induction. Acute rejection within 200 days of LT occurred in 31 (12%) graft failure in 8 (3%); and re-transplantation in 5 (2%). One hundred twenty-seven patients (50%) developed 274 infections; 63 (25%) had 1 infection and 64 (25%) had ≥ 2 infections. Median time to first infection after LT was 26 days [IQR 9–72]. Out of 274 infections, 182 (66%) occurred in <90 days. Severe infection occurred in 40/127 (31%). Cystitis (16%), colitis (12%), and pneumonia (11%) were common. Bacterial, viral, and fungal infections were 63%, 22%, and 7% respectively. Common bacterial pathogens were Enterococcus sp. (15%), Clostridium difficile (12%) and E. coli (8%). Thirty-five (13%) opportunistic infections (OI) occurred due to Cytomegalovirus [CMV] (26), Candida (4), Cryptococcus (3), HHV-8 (1), and Aspergillus (1). Mortality due to infection was 3%, while all-cause mortality was 12%.

Frequency of discharge to sub-acute or extended care facility after infection was 23%. Aspergillus 25.5%; univariable analysis, a polymicrobial BSI (14.7 vs. 57.1%; CI ] 0.01—11.6], liver 2.5 [1.1–5.4], heart 2.4 [1.1–5.1]) and acquired severe infection in SOT serves as proof of concept of such techniques in clinical research.

Conclusion. Infections are common in this older LT cohort and occurred mainly in the early post-LT period. OIs were infrequent except for CMV. Despite concerns for immunosuppression and immunosuppression, the outcome of infection within the 200 days of LT was overall favorable.

Disclosures. All authors: No reported disclosures.

132. Solid Organ Transplantation (SOT) and Data Mining: Bloodstream Infections (BSI) Have a Significant Impact on One-Year Survival, and qSOFA ≥ 2 Predicts 30-Day Mortality

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Background. We created a retrospective and prospective database of SOT recipients using innovative data mining tools. This study describing the epidemiology of BSI in SOT serves as a proof of concept of such techniques in clinical research.

Methods. The design of the study was a retrospective, single-center, cohort study. Data mining tools were used to extract information from the electronic medical record and merged it with data from the SRTR (Figure 1). First SOT from January 1, 2010 to December 31, 2015 were included. Charts of subjects with positive blood cultures were manually reviewed and adjudicated using CDC/NHSN surveillance criteria. The 1-year cumulative incidence was calculated using the Kaplan–Meier method. Cox proportional hazards models were used to identify risk factors for BSI and 1-year mortality. BSI was analyzed as a time-dependent covariate in the mortality model. Fisher’s exact test and chi-square were used to identify risk factors for 30-day mortality and MDRO.

Results. A total of 917 SOT recipients met inclusion criteria. Seventy-five patients experienced at least one BSI. The cumulative incidence was 8.4% (95% CI 6.8–10.4) (Figure 1). The onset of the first BSI episode was: 30 episodes (40%) <1 month, 33 (44%) 1–6 months, and 12 (16%) >6 months. The most common pathogens were Klebsiella sp. (16%), Vancomycin-resistant E. faecium (12%), E. coli (12%), CoNS (12%), and Candida sp. (9.3%). Nineteen isolates (25%) were identified as MDRO; the risk of MDRO was highest <1 month compared with 1–6 months (44.8 vs. 12.1) (12%), and Klebsiella (8%). Thirty-five (13%) opportunistic infections (OI) occurred due to Cytomegalovirus [CMV] (26), Candida (4), Cryptococcus (3), HHV-8 (1), and Aspergillus (1). Mortality due to infection was 3%, while all-cause mortality was 12%.

Frequency of discharge to sub-acute or extended care facility after infection was 23%. Aspergillus 25.5%; univariable analysis, a polymicrobial BSI (14.7 vs. 57.1%; CI ] 0.01—11.6], liver 2.5 [1.1–5.4], heart 2.4 [1.1–5.1]) and acquired severe infection in SOT serves as proof of concept of such techniques in clinical research.

Conclusion. Infections are common in this older LT cohort and occurred mainly in the early post-LT period. OIs were infrequent except for CMV. Despite concerns for immunosuppression and immunosuppression, the outcome of infection within the 200 days of LT was overall favorable.

Disclosures. All authors: No reported disclosures.

133. Strongyloides stercoralis Infection Incidence, Risk Factors and Outcomes Among Solid Organ Transplant Candidates and Recipients; a Florida Center Experience

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Background. Most infections of Strongyloides stercoralis are asymptomatic but can be fulminant in the immunosuppressed. Fatal infections in transplant patients have been reported in United States but incidence estimates are lacking. Our protocol for Strongyloides until 2009 screened immigrants and those with travel history to endemic areas. In 2010, we began universal screening of SOT candidates due to a case of disseminated Strongyloidiitis in an unscreened lung transplant recipient with unknown risk factors. We calculated the incidence of Strongyloides stercoralis in our SOT candidates and associated risk factors, treatment, and outcomes since protocol change.

Methods. A retrospective review was performed of patients who underwent transplant evaluation from January 2014 to July 2016. Patients positive for Strongyloides stercoralis were reviewed for age, sex, ethnicity, place of birth, travel history, occupation, eosinophilia, treatment, and outcome. We report descriptive statistics.

Results. Of a total of 3,351 SOT patients, 116 tested positive (heart 33, lung 24, kidney 26, liver 31, pancreas 2) with an incidence of 4.9%. A total of 113 charts were available for review. The characteristics of the patients are summarized in Table 1. Fifty patients had traditional risk factors (44%) and 63 lacked them (56%). Eosinophilia was present in 15% of cases. Of those transplanted, 87% received prophylaxis and none developed active Strongyloidiitis.

Conclusion. Our results show that S. stercoralis infection has a relatively high incidence in SOT patients and universal screening identified a substantial number that otherwise would go undetected, placing the transplant patient at risk of a fatal, yet preventable complication.