

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 thymoglobulin 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 61%, 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%.

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 immunosenescence, the outcome of infection within the 200 days of LT was overall favorable.

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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 and SCCM/ESICM 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 2). 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 and >6 months (44.8 vs. 12.1 vs. 16.7; $P = 0.01$). The most common source of BSI was CLABSI (29%) (Figure 3). In multivariable analysis, the risk of BSI was associated with organ type (HR [95% CI] = Multiorgan 3.5 [1.1–11.6], liver 2.5 [1.1–5.4], heart 2.4 [1.1–5.1]) and acquisition of a BSI was associated with a higher 1-year mortality (HR = 8.7 [5.1–14.7]). In univariable analysis, a polymicrobial BSI (14.7 vs. 57.1%; $P = 0.02$), qSOFA ≥ 2 (0.0 vs. 25.5%; $P = 0.02$) and septic shock (3.9 vs. 52.2%; $P < 0.001$) were associated with an increased risk of death at 30 days.

Conclusion. A BSI significantly affects the 1-year survival of SOT recipients. A qSOFA ≥ 2 can be used to identify patients at risk for death. Additionally, this study illustrates the potential of data mining tools to study infectious complications.

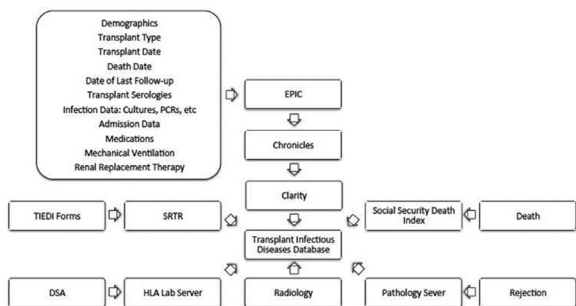
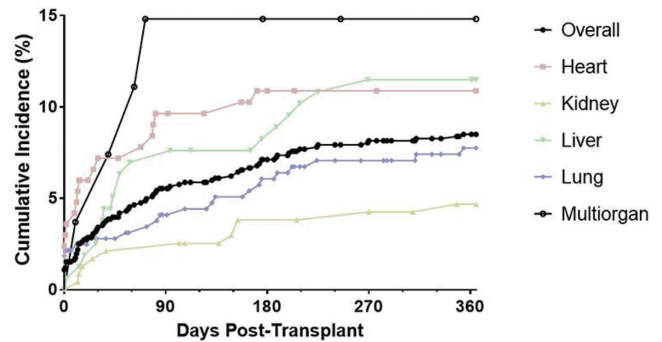


Figure 1: Transplant Infectious Diseases Database – Data Flow



	All	Heart	Kidney	Liver	Lung	Multiorgan
Cumulative Incidence (%)	8.4 [6.8-10.4]	10.9 [7.0-16.7]	4.7 [2.6-8.3]	11.5 [7.4-17.6]	7.8 [5.3-11.4]	14.8 [5.8-34.8]
95% CI						

Figure 2: Cumulative incidence of BSI at 1 year post-transplant

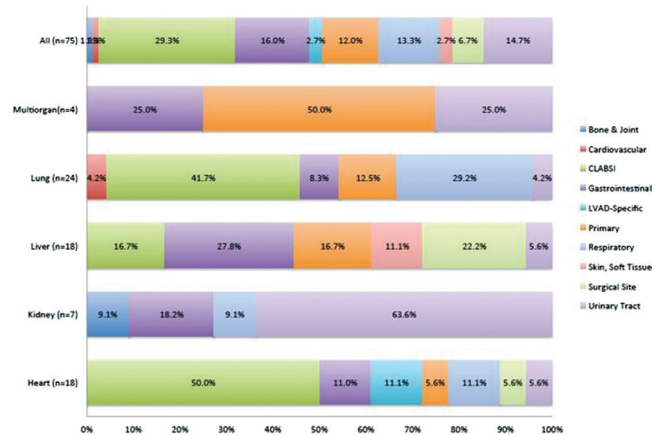


Figure 3: Source of BSI by CDC/NHSN Criteria by Transplant Type

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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 *Strongyloides* 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 2,351 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 *Strongyloides*.

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.