31, 2014. Baseline demographic characteristics, results of TST and LTBI therapy were collected. This cohort was compared with a pre-intervention cohort of sporadically tested patients from January 1, 2008–December 31, 2009. 

Results. During the post-intervention period, 170 patients with MM had a TST. At the time of TST, 113 (66.4%) patients had a lymphocyte count ≥1.0 × 10^6/L. Fourteen patients (8.2%) had positive TST results. There were also 16 patients with radiographic evidence of prior granulomatous disease on chest CT. A total of 12 (75%) patients had no positive radiographic findings and had negative TST results. Notably, 7/12 (58.3%) had a lymphocyte count ≥1.0 × 10^6/L at the time of testing. Eleven patients with positive TST results and 2 with positive radiographic results alone were treated for LTBI. There was one case of active TB diagnosed in a patient with a negative TST. There were no TST tests performed in the pre-intervention cohort and no cases of active TB were documented.

Conclusion. A significant portion of our MM patients may benefit from LTBI therapy. A targeted program combining evaluation of host risk factors, imaging findings and screening tests would optimize LTBI diagnosis and management and may be effective in preventing the development of active TB.

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1578. Back to Bactrim—Utilizing Preferred Prophylaxis Strategies in Immunocompromised Hosts Via a Trimethoprim-Sulfamethoxazole Rechallenge Program

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Background. Trimethoprim-sulfamethoxazole (TMP-SMX) is the preferred agent for Pneumocystis jirovecii pneumonia prophylaxis in immunocompromised host (ICH). However, TMP-SMX is frequently avoided due to an adverse drug reaction (ADR) history. We report on a novel multicentre programmatic approach to TMP-SMX ADRs in ICH.

Methods. We reviewed ICH with a reported TMP-SMX ADR referred to the conjoint antibiotic allergy services at Austin Health (Melb, Aus) and Peter MacCallum Cancer Centre (Melb, Aus) between April 2015 and May 2018. ICH were defined as patients with a history of cancer, transplantation, autoimmune condition or prednisolone use ≥20 mg/day for 1 month. Patients were assessed and managed per the TMP-SMX ADR protocol (Figure 1).

Results. Eighteen patients were assessed, of which 16 (89%) underwent allergy testing (6;89% patch testing [PT] and/or 9;56% oral rechallenge [OC]) and 2 (11%; 1 of whom was OC) received a low-risk TMP-SMX protocol (Figure 1).

Conclusion. A novel TMP-SMX ADR protocol was able to identify ICH with severe allergy phenotypes and provide alternative antibiotic sulfonamide therapeutic options, whilst safely rechallenging the majority with low-risk TMP-SMX ADR histories.

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1579. Evaluation of MATCH: an Electronic Individual Patient-Focused Management System Aimed at Preventing Cytomegalovirus Disease Following Solid Organ Transplantation

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Background. Cytomegalovirus (CMV) infection is common among solid-organ transplant (SOT) recipients and may cause CMV disease, if not promptly treated. Strategies to prevent CMV disease include chemoprophylaxis and pre-emptive monitoring and treatment of emerging subclinical infection. To optimize the implementation of these strategies as part of routine care, we developed and implemented a proactive and patient-tailored CMV management system for SOT patients (the MATCH program) in our center. Two key performance characteristics of success of MATCH are diagnosing CMV at low levels and avoiding CMV disease at diagnosis; these characteristics are assessed here before (2007–2010), during (2011–2012) and after (2013–2015) the implementation of the MATCH program.

Methods. In MATCH, SOT recipients follow a personalized, yet standardized, plan for monitoring, prophylaxis and pre-emptive therapy depending on underlying risk for CMV infection. The plan is composed in accordance with the recipient’s prior risk as to CMV IgG serostatus and is continually updated during the post-transplant course according to patient’s current situation. Each individual patient plan is produced and implemented by a rule-based artificial intelligence (AI) platform, harnessing relevant real-time data from electronic medical records. Via predefined algorithms, plans and revisions are created and alerts are generated in case of missed planned monitoring for or molecular detection of CMV infection. Prior to its implementation, prevention of CMV disease was left at the discretion of the individual physician.

Results. A total of 603, 357, and 531 patients received an SOT before, during and after implementing MATCH, resp., of whom 88 (14.6%), 56 (15.7%) and 119 (22.4%) developed CMV infection within the first year of transplantation (Table 1). Among those with CMV infection, the % with high viral load decreased as did the % with CMV disease at the time of diagnosis of CMV infection during and after the implementation of MATCH relative to before (Figure 1).

Conclusion. The implementation of a rule-based AI platform guiding routine prevention of CMV disease among SOT recipients was associated with improved CMV-specific outcome, indicating its ability to identify the CMV infection sooner after onset and before causing disease.

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1580. Characteristics of Early vs. Late Onset Post-transplant Lymphoproliferative Disorder After Liver Transplant: A Descriptive Study of the United Network of Organ Sharing (UNOS) Database
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**Background.** Post-transplant lymphoproliferative disorder (PTLD) is a devastating complication of solid-organ transplant. In liver transplant, studies comparing the risk factors for early vs. late onset PTLD have been limited to single centers. Using a national database, we sought to compare early and late onset PTLD in adult and pediatric liver transplant patients in terms of patient characteristics, immunosuppressive regimens, and mortality.

**Methods.** We conducted a retrospective analysis of the UNOS database to compare early (<1 year) and late (1+ year) onset PTLD in pediatric (<18) and adult (18+) liver transplant patients. We compared patient demographics, co-morbid conditions, immunosuppressive regimens, Epstein-Barr virus (EBV) and cytomegalovirus (CMV) risk status, reason for transplant, and mortality. We censored EBV and CMV risk status into high, intermediate, and low based on donor and recipient serostatus. Categorical variables were analyzed using Fisher’s exact test. The Kaplan-Meier method, log-rank test, and multivariable Cox regression were used to examine mortality.

**Results.** Ninety-two pediatric patients and 807 adult patients met study criteria. Overall mortality was 35.87 and 53.78% for pediatric and adult patients, respectively. In adults, unadjusted survival was significantly different for early vs. late onset PTLD (P < 0.001; Figure 1); the latter was associated with a 64.33% decreased mortality risk (95% CI: 51.17–73.95%; P < 0.001). There was no difference in mortality in pediatric patients (P = 0.549). In neither population was EBV risk status associated with early vs. late onset PTLD. In adults, tacrolimus, mycophenolate mofetil (MMF), and steroid maintenance therapy were associated with late onset PTLD (P < 0.001; 0.006; <0.001).

**Conclusion.** We conclude the following: (1) Mortality is greater for early vs. late onset PTLD in adult patients; the converse has been shown previously. (2) Tacrolimus, MMF, and steroids are associated with late onset PTLD in adult patients. (3) EBV risk status did not differ between early and late onset PTLD in both the adult and pediatric populations. This contradicts established reports that EBV negative serostatus of the recipient and truncated duration of antimicrobial prophylaxis for acute variceal bleeding.

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**Figure 1.**

1581. Impact of Colonization with Fluoroquinolone-Resistant Enterobacteriaceae on the Risk of Gram-Negative Bacteremia in Neutropenic Stem Cell Transplant Recipients
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**Background.** Fluoroquinolone (FQ) prophylaxis is widely used to prevent bloodstream infections (BSIs) in neutropenic patients undergoing hematopoietic stem cell transplantation (HCT). In order to assess whether increasing FQ resistance threatens the effectiveness of FQ prophylaxis, we screened HCT recipients for colonization with FQ-resistant Enterobacteriaceae (FQRE) and assessed the impact of colonization on the risk of BSI.

**Methods.** We collected stool samples on admission for HCT and weekly until neutrophil engraftment from patients at NewYork-Presbyterian Hospital/Weill Cornell Medical Center from November 2016 to March 2018. Patients received FQ prophylaxis and were exposed to FQ-resistant swabs when stool was unavailable. Stool and swab samples were plated onto MacConkey agar with 1 μg/ml ciprofloxacin, and colonies were identified and underwent antimicrobial susceptibility testing. We determined the prevalence of colonization with FQRE on admission for HCT, the risk of acquiring FQRE, and compared the risk of BSI during the transplant admission in colonized and noncolonized patients.

**Results.** We evaluated 178 HCT recipients and found that 35 (20%) had pre-transplant FQRE colonization (allogeneic: 20/89, 22%; autologous: 15/89, 17%). Thirty FQRE (86%) were *Escherichia coli*, 5 (14%) were *Klebsiella pneumoniae*, and 13 (37%) were *Pseudomonas aeruginosa*. Eighty-six percent were *β-lactamase* producers. FQRE colonization developed in 35 patients with pre-transplant FQRE colonization developed BSI due to an Enterobacteriaceae, and all bloodstream isolates had identical susceptibility profiles to the colonizing FQRE. In contrast, only one (1%) of 143 patients without pre-transplant FQRE colonization developed Enterobacteriaceae BSI (P = 0.001). Patients with pre-transplant FQRE colonization also had higher rates of any Gram-negative BSI (20% vs. 1%, P < 0.001), but did not have increased risk of Gram-positive BSI (6% vs. 11%, P = 0.5). Of 123 patients without initial FQRE colonization who had follow-up samples collected, 10 (8%) acquired FQRE during post-HCT neutropenia.

**Conclusion.** FQRE colonization is common on admission for HCT and is associated with decreased effectiveness of levofloxacin prophylaxis in preventing Gram-negative BSI during post-transplant neutropenia.

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1582. Is Antibiotic Prophylaxis Needed for All Acute Variceal Bleeds in Decompensated Cirrhosis? A Retrospective Pilot Study
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**Background.** Guidelines recommend empiric antibiotic prophylaxis for acute variceal bleeding, but no studies compare the outcomes between those treated with guideline recommended duration and those not treated (low suspicion) or treatment duration truncated (negative work up). We hypothesized that outcomes may not be different between the two groups.

**Methods.** Retrospective pilot study for the period 2013–2017. Cases were extracted using ICD 9(4,560) and ICD 10(I8501, I8511) codes and the following criteria were applied. Inclusion: Age >18 years and decompensated cirrhosis with acute variceal bleeding. Exclusion: Age <18 years, septic shock, receipt of antibiotics <14 days before admission, human immunodeficiency virus infection. Data gathered on demographics, APACHE II, Charlson score, modified Child-Turcotte-Pugh classification (CTP), mortality at 6 weeks, re-bleeding within 7 days, readmissions (30 and 90 days), incidence of infections at admission and follow-up. Using SPSS, we compared those who received antibiotics <3 days to ≥23 days.

**Results.** Eighty-three cases met criteria (M:F = 52:31, age = 54.5 ± 11.6 years, CTP: A = 20(24.1%), B = 34 (41.9%), C = 29(33.7%). Alcohol was etiology in 57(68.6%) [52(91.2%) alcohol only, 5(8.8%) with alcohol and viral hepatitis]; hepatitis C virus (HCV): 12/83 (14.6%)(650) HCV only; hepatitis B virus: 3(3.6%); NASH: 12(14.6%) [9(75%) NASH only, 2(16.7%) with HCV, 1 with autoimmune hepatitis]); cryptogenic: 3(3.6%); autoimmune: 2(2.4%), others: 4(ischemic, biliary cirrhosis, transplant). Antibiotics were either not administered or truncated in 21(25.3%) patients. In comparing guideline concordant (23 days) and truncated (<3 days) groups, no statistically significant difference was present for APACHE II, Charlson score, mortality (10 vs. 3, P = 0.928), re-bleeding (2 vs. 0, P = 0.37) and readmission at 30 and 90 days (18 vs. 3, P = 0.147; 11 vs. 3, P = 0.715). Drug-resistant infections were seen in ≤8.6% patients requiring readmissions within 90 days.

**Conclusion.** We found no differences in outcomes between guideline concordant and truncated duration of antimicrobial prophylaxis for acute variceal bleeding.