



Methods: This study assessed the ability of digital education to improve the ability of ID specialists to make evidence-based recommendations for CMV management in HSCT recipients. A CME/ABIM MOC educational program featuring interactive discussion between two ID faculty was developed and launched on 12/12/19, on a website dedicated to continuous professional development. Educational effectiveness was assessed with a repeated-pairs pre-/post-assessment study design; each individual served as his/her own control. A chi-square test assessed changes pre- to post-assessment. *P* values < 0.05 are statistically significant. Effect sizes were evaluated using Cramer's *V* (< 0.05 modest; 0.06–0.15 noticeable effect; 0.16–0.26 considerable effect; > 0.26 extensive effect). Data for this matched-learner analysis were collected through 04/14/20.

Results: To date, 3315 HCPs (2891 physicians; 162 nurses/NPs) have participated in the activity. Data from the subset of ID specialists (*n*=190) who answered all pre-/post-assessment questions during the initial study period were analyzed. Following activity participation, significant improvements were observed in the proportion of ID specialists who answered all assessment questions correctly (8% pre vs 28% post; *P* < .0001; *V*=.217). Improvements were also observed in several specific areas of assessment (Figure). Additionally, 65% of ID specialists indicated they planned to modify their patient assessment or treatment approach because of participating in the education.

Conclusion: Participation in this digital educational program significantly improved ID specialists' ability to differentiate among therapeutic options when developing management strategies for HSCT recipients with CMV infection/reactivation. These findings highlight the potential for well-designed online education to positively impact physicians' competence and confidence.

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574. De-escalation of Broad Spectrum Antibiotics during Cytokine Release Syndrome with Haploidentical Hematopoietic Stem Cell Transplantation

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Session: P-22. Care Strategies for Transplant Patients

Background: Fever is a common component of cytokine release syndrome (CRS) occurring in 90% of patients undergoing haploidentical hematopoietic stem cell transplantation (Haplo-HSCT). Fevers typically occur between the stem cell infusion (Day 0) and initiation of post-transplant cyclophosphamide and are often confused with febrile neutropenia (FN). Due to longer time to engraftment in Haplo-HSCT, CRS/FN exposes patients to prolonged courses of empiric broad spectrum antibiotic (BSA) therapy increasing the risk for multi-drug resistant organisms. Recently, at Yale New Haven Health, our practice has changed to now recommend antibiotic de-escalation to prophylaxis after 7 days of BSA if no infection is identified. The objective of this study was to assess the incidence of breakthrough infections with the de-escalation of BSA in CRS/FN. Secondary endpoints include rate of FN, rate of de-escalation, rate of recurrent fevers, duration of BSA, and positive blood culture data.

Methods: The patient population included those undergoing Haplo-HSCT between July 2016 and February 2020 and who developed CRS/FN between Day 0 and Day +5. Patients were excluded if they had prolonged hospitalization due to non-infectious complications or engraftment failure. Bacteremia was defined using NHSN definitions.

Results: Of the 53 Haplo-HSCTs assessed, 43 experienced CRS/FN. Thirty-five Haplo-HSCT (81%) with CRS/FN had negative cultures and 23 (66%) of these were de-escalated back to antibacterial prophylaxis. The median duration of BSA in the de-escalated group was 7 days (range 5–13) compared to 16.5 days range (13–21) in the non-de-escalated group (*p*< 0.001). Among those de-escalated, 7 (30%) had recurrent

fever occurring at a median of 4 days (range 2–14) and were placed back on BSA. Two Haplo-HSCT (9%) that had fever after de-escalation developed a breakthrough bacteremia. No Haplo-HSCT after de-escalation had fever or re-admission for bacteremia 30 days after engraftment. Four Haplo-HSCT (9%) with CRS/FN had positive blood cultures; however, three (7%) were still able to be de-escalated from BSA to narrower agents based on susceptibilities.

Conclusion: De-escalation of BSA in FN/CRS in Haplo-HSCT patients reduced unnecessary, prolonged antibiotic exposure with a low incidence of breakthrough infections.

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575. Effectiveness of Short vs Long Course Perioperative Antibiotics in Lung Transplant Recipients with Donor Positive Respiratory Cultures

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Session: P-22. Care Strategies for Transplant Patients

Background: Lung transplant recipients are at increased risk for infection in the early post-operative phase. Perioperative antibiotic (POA) practices are variable among transplant centers with sparse data regarding optimal antibiotic prophylaxis duration. This study aimed to evaluate the efficacy of short course (SC) (≤10 days) vs long course (LC) (≥11 days) POA in lung transplant patients.

Methods: This was a single-center, retrospective study of non-cystic fibrosis first time lung transplant recipients with donor positive cultures between Aug 2013 and Sept 2019. Patients who died within 14 days of transplant were excluded. Data collected included baseline characteristics, donor and recipient cultures, POA, and hospitalization details. The primary outcome was 30-day recipient freedom from donor-derived respiratory bacterial infection. Secondary outcomes included development of *Clostridioides difficile* infection (CDI), cumulative time on ventilator, post-op time to extubation, in-hospital all-cause mortality, and 30-day development of POA resistance. Descriptive statistics were used for analysis. Continuous variables were compared using the Wilcoxon rank sum test while categorical variables were compared using the chi-square or Fisher's exact test. Statistical significance was defined as *p*< 0.05.

Results: A total of 147 patients were included (58 SC vs 89 LC). Median POA duration in the SC group was 6.5 days vs 13 days in the LC group (*p*< 0.0001). The primary outcome of 30-day freedom from donor-derived respiratory infection was present in 56 (97%) patients in the SC vs. 85 (96%) patients in the LC group (*p*= 1). There was no difference in development of CDI (*p*= 0.4), mortality (*p*= 1), or resistant organisms (*p*=0.28) while cumulative ventilator time and time to post-op extubation were longer in the LC group (*p*= 0.002 & 0.007, respectively). Methicillin-sensitive *Staphylococcus aureus* was the most common organism isolated from donors in the SC (23, 40%) and LC (48, 54%) groups.

Conclusion: Among lung transplant recipients with positive donor cultures, short course POA was as effective as long course in preventing donor-derived bacterial pneumonia. Further studies are needed to assess heterogeneity in POA practices and optimal duration among transplant centers.

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576. Half-dose Valganciclovir Prophylaxis is Safe and Cost-effective in CMV Seropositive Renal Transplant Recipients

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Session: P-22. Care Strategies for Transplant Patients

Background: Observational studies suggest that half-dose valganciclovir (VGV) prophylaxis (450 mg daily for normal renal function) is as effective as full-dose (900 mg daily) in preventing CMV infection among kidney transplant recipients (KTR). However, this practice is not supported by current guidelines, for fear