	Supportive Care *N* = 12 (%)	Oral RBV *N* = 70 (%)	Inhaled RBV *N* = 32 (%)	*P*-value
Site of infection				0.0004
Upper respiratory tract	1 (8.3)	32 (45.7)	11 (34.4)	
Lower respiratory tract	3 (25)	24 (34.3)	18 (56.3)	
Asymptomatic	8 (66.7)	14 (20)	3 (9.4)	
Oxygen requirement at diagnosis				0.003
None	8 (66.7)	61 (87.1)	18 (56.3)	
1–2 L/minute	2 (16.7)	6 (8.6)	4 (12.5)	
>2 L/minute	2 (16.7)	3 (4.3)	10 (31.3)	

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1601. Effect of Preemptive Rituximab Therapy on Epstein–Barr Reactivation in Allogenic Hematopoietic Stem Cell Pediatric Transplants

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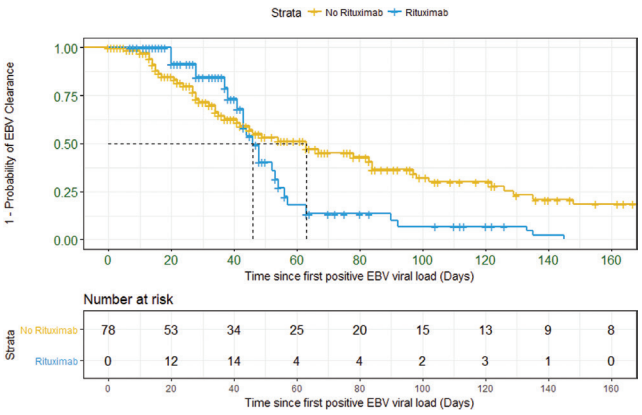
Background. Children with Epstein–Barr virus (EBV) viremia after hematopoietic stem cell transplantation (HSCT) are at increased risk of post-transplant lymphoproliferative disease (PTLD). Our aim was to assess whether pre-emptive rituximab reduced EBV-viral load (EBV-VL) and the risk of developing PTLD.

Methods. We retrospectively included all children who had a positive EBV-VL within 12 months after an allogenic HSCT (2007–2015) in a single tertiary pediatric hospital. Whole blood EBV-VL was monitored weekly using a real-time PCR, during the first 100 days after HSCT and then monthly until 6 months post-HSCT or until EBV-VL became undetectable. EBV-VL clearance was defined as two negative EBV-VL at least 1 week apart. Pre-emptive rituximab was defined as a treatment administered before the occurrence of PTLD. We determined the impact of pre-emptive rituximab on EBV-VL clearance, using a marginal structural cox model, adjusting for age at transplant, time between transplant and first positive EBV-VL, *in-vivo* T-cell depletion at induction, value of EBV-VL at the first dose of rituximab, and the EBV-VL value at the current and previous time point.

Results. Of 214 children who underwent allogenic HSCT, EBV DNA was detected in 87 (41%) children. Children who received rituximab after diagnosis of PTLD were excluded, leading to a cohort of 78 children. Twenty-two (28%) children received pre-emptive rituximab. Mean (SD) age was similar in both groups (10 [5] year). First post-transplant positive EBV-VL was earlier in the pre-emptive rituximab group (mean of 55 [54] vs. 113 [96] days; $P < 0.05$) and first positive EBV-VL was higher in the pre-emptive rituximab group (mean of 3.4 [0.6] vs. 3.0 [0.6] $\log_{10}$/mL; $P < 0.05$). In adjusted analyses, pre-emptive rituximab was associated with a higher likelihood of EBV-VL clearance (hazard ratio 1.86; 95% confidence interval 1.10–3.14; Figure 1). Of the 10 children who developed PTLD, none had received pre-emptive rituximab.

Conclusion. EBV viremia is frequent in children with allogenic HSCT. Our results suggest that pre-emptive rituximab is associated with more rapid EBV-VL clearance. The effect of rituximab on the risk of PTLD needs to be better defined.

Figure 1. Inverse probability of EBV viremia clearance in children.



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

1602. *Clostridium difficile* Infection as a Predictor of Acute Graft vs. Host Disease Among Allogenic Stem Cell Transplant Recipients

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Background. *Clostridium difficile* infection (CDI) is a major cause of infectious diarrhea especially among allogenic stem cell transplant (SCT) recipients. The relationship between CDI and acute Graft vs. Host Disease (aGvHD) has been a topic of great interest for some time, as either of the two conditions may affect the other. We studied the temporal relation of CDI on aGvHD in the first 100 days posttransplant in a large cohort of allogeneic SCT recipients.

Methods. We conducted an analysis of retrospective data extracted from the medical records of adult patients (more than 18 years of age) who underwent their first allogenic SCT between January 1, 2010 and December 30, 2016 at the University of Kansas Health System. Patients were followed for CDI events between day −10 to day +100 of allogenic transplant. Diagnosis and staging of aGvHD were determined based on standardized aGvHD grading scale utilizing clinical and pathological information between day 0 and day +100. Analysis included descriptive statistics, multivariable logistic regression, and survival analysis with CDI as a time-dependent variable.

Results.: A total of 656 allogenic SCT recipients were included in the analysis. Of the total sample, 419 (64%) developed aGvHD within the first 100 days. CDI was observed in 112 (17%) of all allogenic SCT recipients, 72 (64%) of CDI cases developed prior to the onset of aGvHD. Fidaxomicin was used in the treatment of 57 (50%), whereas, vancomycin was used in 53 (47%) of CDI cases. On unadjusted analysis, CDI was associated with aGvHD ($P = 0.0036$), high grade aGvHD ($P = 0.0132$), and GI aGvHD ($P = 0.0003$). On multivariate survival analysis, the following predictors were associated with aGvHD: CDI (adjusted Hazard Ratio (aHR) = 1.44, $P = 0.0047$), matched unrelated donor vs. matched related donor transplant type (aHR = 1.40, $P = 0.0023$), myeloablative vs. reduced intensity conditioning (aHR = 1.87, $P < 0.0001$). This was consistent with the stepwise logistic regression model.

Conclusion. Allogenic SCT recipients with CDI have a higher risk of aGvHD compared with those without CDI.

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

1603. Our Experience With *M. marinum* Cutaneous Infections in Three Patients Receiving Anti-TNFα

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Background. TNFα inhibitors are a well-known risk factor for active tuberculosis but less is known about the link between TNFα inhibitors and other mycobacterial diseases, particularly *M. marinum*. With the increase in use of these medications, and the trend toward more outdoors activities that include aquatic environment exposure, focus should be on better understanding of the link between use of TNFα inhibitors and the development of a severe M. marinum infection that might require earlier diagnosis and more aggressive antibiotic therapy.

Methods. We will describe our experience with three cases of aggressive cutaneous M. marinum infection in patients taking anti-TNFα that presented to Abington Memorial Hospital in Pennsylvania between 2014 and 2017.

Results. Age, gender, diagnosis

Age, gender, diagnosis	Anti TNFα, duration and indication	Exposure	Delay in diagnosis	Treatment	Progression
47 y.o F Cellulitis/ lymphangitis	Etanercept, 5 years, for RA	Municipal pool	2 weeks	Clarithromycin+ etmabutol	Cleared in 2 months
34 y.o M cellulitis	Infliximab, 7 years, UC	Salt water fish tank	10 weeks	Clarithromycin+ etmabutol	Cleared in 3 weeks
62 y.o F Cellulitis/ lymphangitis	Adalimumab, 8 months, RA	Barnacle injury	4 weeks	Clarithromycin+ Rifampin	Cleared in 1 month