TABLE I. Characteristics of Patients Discharged While Neutropenic and Risk Factors for Subsequent Readmission and Serious Infection

	<200	(200-500)	>500	P-value*
N= 391	102 (26)	111(28)	178(45)	
Age (median)	9	10	12	0.3
Gender (%) M	61(60)	72 (65)	101 (57)	0.51
F	51(40)	39(35)	77 (43)	
Diagnosis N (%)	46(46)	44 (40)	49 (28)	0.01
ALL 139(35)	7(6)	17 (16)	21 (13)	
AML 45 (12)	10 (10)	15 (14)	33 (17)	
Lymphoma 58 (15)	39 (38)	34(30)	75 (42)	
ST 149 (38)				
Duration FNE(LOT) (median,SD)	4 (2-6)	6 (2-8)	8 (3-13)	0.03
(last fever-AC) (median Days)	2 (1-4)	4(2-7)	6 (4-9)	0.02
AMC values				
<100 mm 101(25%)	35(34%)	39 (35)	27 (15)	<0.01
>100 mm 290 (75%)	67(66%)	72 (65)	151 (85)	
Median Days (AMC100-AC)_	2 (1-3)	3(2-6)	5 (2-7)	<0.01
Median Days (APC300-AC)	1 (0-2)	2 (1-4)	5(2-7)	<0.01
Recurrent fever 29 (7.4)	12(11.7)	7(6.3)	10 (5.6)	0.08
AMC≤100 mm3 18 (18%)	9(25)	5 (12.8)	4 (15)	<0.001
AMC>100 mm3 11 (3.7%)	3 (4.4)	2(2.8)	6 (3.9)	
Readmission 10 d, 22(5.6)	10(10)	5(4.5%)	7 (4%)	0.07
AMC≤100 mm3	8(23)	4(10)	4 (14)	<0.001
AMC>100 mm3	2 (3)	1(1.3)	3(1.9)	
New BSI 5, (1%)	2 (1.9)	1(1)	2(1.1)	0.1
AMC≤100 mm3	2(2.8)	1(2.5)	1(3.7)	0.01
AMC>100 mm3	0 (0)	0(0)	1(0.6)	
New MDI (N=12, 1%)	5 (4.9)	3(2.7)	4(2.2)	0.58
AMC≤100 (9	4 (11.4)	2(5.1)	3(11)	0.01
AMC>100 (3	1(1.4)	1(1.3)	1(0.6)	
AdE (N=5, 0.5%)	2(1.9)	1(1)	2(1.1)	0.6
AMC≤100	2 (2.8)	1(1.3)	1(3.7)	0.05
AMC>100	0	0	1(0.6)	

Solid tumor, APC: absolute phagocyte count= APC, defined as ANC + AMC+ bands, MDI=microbiologically documented infection. Adverse events: vital signs changes require IVF, Pressors, or PICU admission. AC antibiotics cessation

* if there are 2 P values for each outcomes. First compare between ANC groups, and second compare between AMC<100 vs AMC>100 for same outcome.

Results. A total of 928 FN episodes (FNEs) were identified. 391 eligible FNEs occurred in 235 patients. Three groups were compared based on ANC (cells/μL) at the time of AC : < 200 in 102 (26%), 200-500 in 111 (28%), and >500 /uL in 178 (46%) (Figure1) with an overall ten-day recurrent fever rate 7.4% (29/391) and readmission rate of 5.6% (22/391). No significant differences in recurrent fever rates were identified among 3 ANC groups (11.7%,, 6.3% and 5.6% respectively, P=0.08) and readmission (10%,4.5%, 4%, respectively; P=0.07)(Table 1).In subset analysis of AMC for each ANC group, patients with AMC >100 at AC have favorable outcomes, regardless ANC threshold (P< 0.01) (Table 1). Median of length of stay of FN was 3 days shorter using AMC >100/uL for BMR compared with any threshold of ANC (P< 0.01) and decrease overall FN cost stay (P< 0.01) (Table 2). Similar analysis show APC >300/uL at time of AC has favourable outcomes and decrease LOS regardless ANC threshold (data not shown here).

Table 2: Cost-effectiveness analysis used AMC and APC as bone marrow recovery and for discharge

	(AMC<100vs 100)	P-value	(APC<300vs>300)	P-value
Ad-LOTD (ANC<200)	**83**	**0.02**	**23**	**0.03**
Ad-LOTD ANC(200-500)	**192**	**0.001**	**139**	**0.01**
Ad-LOTD ANC>500	**385**	**<0.001**	**353**	**<0.001**
Total Saving LOTD	**660**	**<0.001**	**515**	**0.001**
Total cost (1748$/day)	**1.153.680$**	**<0.001**	**990.220$**	**0.001**
DOT/1000 patient day	**314**	**0.01**	**245**	**0.03**

Ad-LOTD: Sum of cumulative additional days for all FNEs for specific category. Defined from day AMC>100 till AC, or APC>300 till AC. DOT: *Antibiotic* days of **therapy**,

Conclusion. Our results suggest that a AMC > 100 /uL regardless of ANC/uL, is a safe threshold value for empiric AC and discharge. This approach may shorten length of stay, reduce burden of cost of febrile neutropenia cost and potential long term antibiotics side effects.

Disclosures. **Lara Danziger-Isakov, MD, MPH**, Ansun (Individual(s) Involved: Self): Scientific Research Study Investigator; Astellas (Individual(s) Involved: Self): Scientific Research Study Investigator; Merck (Individual(s) Involved: Self): Consultant, Scientific Research Study Investigator; Pfizer (Individual(s) Involved: Self): Scientific Research Study Investigator; Shire (Individual(s) Involved: Self): Consultant, Scientific Research Study Investigator; Viracor: Grant/Research Support

65. Impact of an Antibiotic Side-Chain-Based Cross-Reactivity Chart on Antibiotic Use in Patients With β-lactam Allergies and Pneumonia

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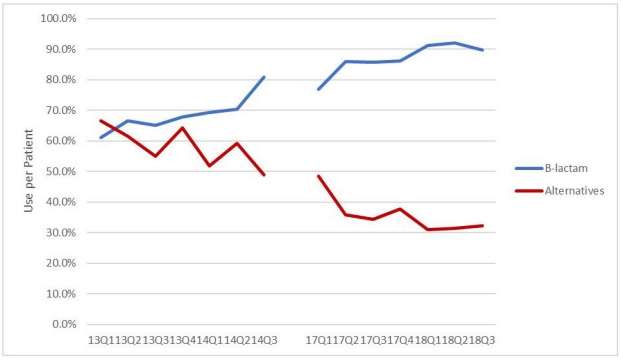
Session: P-04. Antimicrobial Stewardship: Outcomes Assessment (clinical and economic)

Background. β-lactam antibiotics with dissimilar R-group side chains are associated with low cross-reactivity. Despite this, patients with β-lactam allergies are too often treated with alternative antibiotic therapy. An institutional β-lactam side-chain-based cross-reactivity chart was developed and implemented to guide in antibiotic selection for β-lactam allergies patients.

Methods. This single center, retrospective, cohort study analyzed the impact of the implementation of the cross-reactivity chart for patients with documented β-lactam allergies with pneumonia. Study time periods were defined as January 2013 to October 2014 prior to implementation of the chart (historical cohort) and January 2017 to October 2018 (intervention cohort) following institutional implementation and adoption. The primary outcome was the incidence of β-lactam utilization between time periods. Propensity-weighted scoring and interrupted time-series analyses compared outcomes across time periods.

Results. A total of 341 and 623 patient encounters were included in the historical and intervention cohorts, respectively. There was a significant increase in the use of β-lactams for treatment of pneumonia (70.4% vs 89.3%; p < 0.001) and the use of any alternative therapy decreased between cohorts (58.1% vs. 36%; p < 0.001) (Figure 1). β-lactam use per patient significantly improved between cohorts in patients with mild, Type 1 IgE-mediated hypersensitivity reactions (HSRs) and in patients with unknown reactions. There was no difference in overall HSRs between cohorts (2.4% vs. 1.45; p = 0.628), or in patients who received β-lactam antibiotics (1.3% historical group vs 1.1% intervention group; p = 0.467). Median alternative antibiotic days of therapy (3 vs. 2; p = 0.027) and duration of therapy per patient (3 days vs. 2 days; p = 0.023) decreased between cohorts. There was a significant increase in mortality while healthcare facility-onset *Clostridioides difficile* infections decreased between cohorts.

β-Lactam vs. Alternative Therapy Use per Patients by Calendar Quarter



Conclusion. Implementation of a β-lactam side-chain-based cross-reactivity chart significantly increased the utilization of β-lactams in patients with pneumonia without increasing HSRs.

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

66. Improving Antimicrobial Stewardship through Allergy Testing Referrals

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Session: P-04. Antimicrobial Stewardship: Outcomes Assessment (Clinical and Economic)

Background. Penicillins and cephalosporins (PCN/CEPH) are considered first-line antibiotics for numerous infections for their efficacy, tolerability, and cost effectiveness. Unfortunately, their use may be precluded in approximately 10% of the general adult population who self-report 'allergy'. As a result, suboptimal antimicrobials are substituted which may increase toxicities, length of hospitalizations, and antimicrobial resistance with subsequent expense and morbidity. Multiple organizations endorse beta-lactam allergy skin testing (BLAST) as an essential component of antimicrobial stewardship programs. In an attempt to better describe this patient population as well as to protocolize and improve rates of referral to allergy/immunology clinic, a quality initiative was undertaken at our institution.

Methods. Adult inpatients for whom an infectious disease consult was placed over a 6-month period were chart-reviewed for PCN/CEPH allergy. Inappropriately charted allergies were reconciled and patients were recommended referral to allergy/immunology for formal evaluation with BLAST when appropriate. Referrals were placed for agreeable patients who were then evaluated for appropriateness through history and then scheduled for BLAST. Patients who tolerated oral exposures without adverse effects had the allergy removed from their chart and were educated.

Results. 322 patients met inclusion criteria for allergy referral. Of those, 103 agreed to further evaluation, and referrals were placed for 100%. Unfortunately, 7 patients died before referrals could be completed, and 88 referred patients did not complete BLAST for other reasons. In total 8 patients completed BLAST, and allergy was de-labeled in 75% (N= 6) of those cases.

Conclusion. Our data indicated similar prevalence of reported PCN/CEPH allergy between our institution and the general population. We achieved our aim of improving allergy referral rates among this population, however there was a high rate of attrition in the transitions of care. Qualitative review of selected patients highlights common thematic barriers including the COVID-19 pandemic, fiscal concerns, and acuity of condition. Future directions should include BLAST at the point of care or making referrals from the primary care setting.