

Outcomes of Patients with *Stenotrophomonas maltophilia* Infections Treated
with Cefiderocol: PROVE (Retrospective Cefiderocol Chart Review) Study

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OBJECTIVES

A key objective of the ongoing PROVE study is to assess outcomes in patients infected with *Stenotrophomonas maltophilia* as the primary infection identified for cefiderocol use.

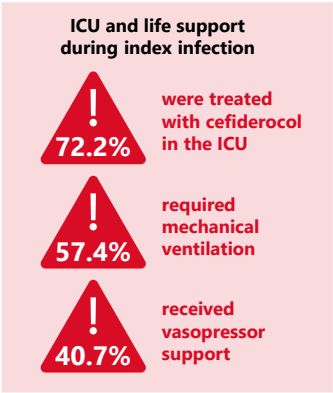
METHODS

- PROVE is an ongoing international, retrospective medical chart review study of cefiderocol use in real-world settings in patients with Gram-negative bacterial infections.
- Eligibility criteria include having a documented Gram-negative bacterial infection that prompted the first-time use of cefiderocol for at least 72 hours. Data on cefiderocol dosing and duration, patient clinical characteristics, and description of the Gram-negative bacterial infection for which cefiderocol was prescribed must be available as well as clinical outcomes.
- Clinical cure was defined as resolution or improvement in infection signs and symptoms, without evidence of later relapse.
- Last hospital day captured for patients was January 14, 2023.

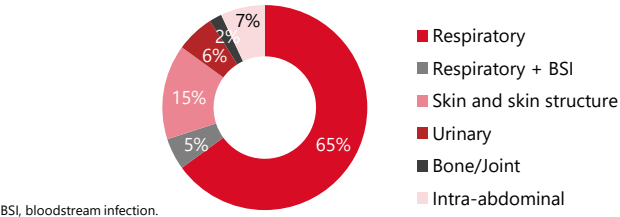
RESULTS

Demographics

- 54 patients were treated with cefiderocol for the first time.
- Median age was 59 years.
- 72.2% of patients were male.
- Chronic pulmonary disease (27.8%), moderate or severe renal disease (18.5%), and COVID-19 (14.8%) were the most frequent comorbidities.
- 21 (38.9%) of patients had one or more immunocompromising condition.
- Infections were polymicrobial in 57.4% of patients, and 38.9% of these co-infections involved *Pseudomonas aeruginosa*.
- Median duration of cefiderocol treatment was 11 days (Q1–Q3: 8–17).

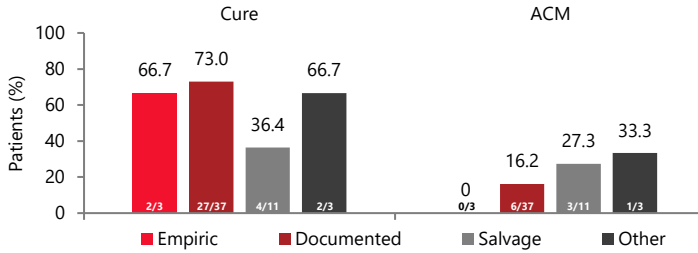


Distribution of infection sites

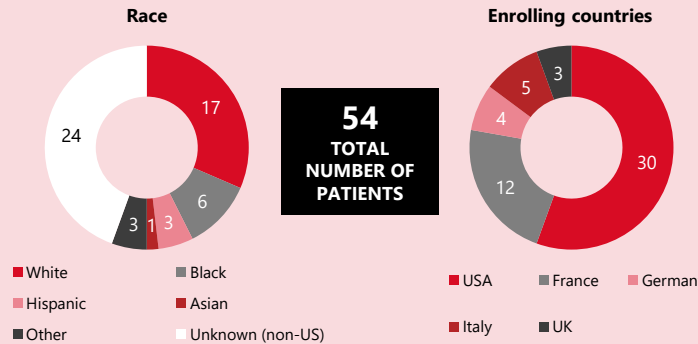
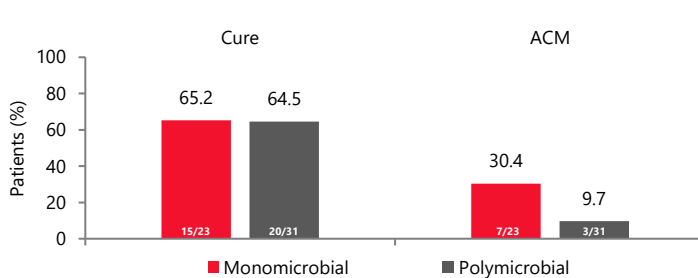


Outcomes of patients with *Stenotrophomonas maltophilia* infections treated by cefiderocol

Clinical cure and Day 30 all-cause mortality (ACM) by type of cefiderocol treatment



Clinical cure and Day 30 ACM by type of infection



Clinical cure and ACM by type of infection

Characteristic	Clinical cure n/N (%)	Day 30 ACM n/N (%)
Overall	35/54 (64.8)	10/54 (18.5)
Infection sites		
BSI only	0/0 (0)	0/0 (0)
Respiratory	21/35 (60.0)	8/35 (22.9)
Respiratory + BSI	2/3 (66.7)	1/3 (33.3)
Skin and skin structure	6/8 (75.0)	0/8 (0)
Urinary	3/3 (100)	0/3 (0)
Bone/Joint	1/1 (100)	0/1 (0)
Intra-abdominal	2/4 (50)	1/4 (25.0)
Pathogens in polymicrobial infections¹		
<i>Pseudomonas aeruginosa</i>	13/21 (61.9)	1/21 (4.8)
<i>Acinetobacter baumannii</i>	5/8 (62.5)	2/8 (25.0)
Enterobacterales	4/7 (57.1)	0/7 (0)
Other Gram-negative pathogens	1/3 (33.3)	1/3 (33.3)
Time from index culture to first cefiderocol dose		
Cefiderocol initiated before index culture	2/2 (100)	0/2 (0)
≤2 days	2/3 (66.7)	2/3 (66.7)
3–4 days	10/12 (83.3)	1/12 (8.3)
5–7 days	9/17 (52.9)	3/17 (17.6)
>7 days	12/20 (60.0)	4/20 (20.0)
Monotherapy vs combination therapy		
Monotherapy	16/23 (69.6)	3/23 (13.0)
Combination therapy ²	19/31 (61.3)	7/31 (22.6)

[1] Any pathogen at the primary infection site (polymicrobial) or a related secondary site with *S. maltophilia* present.
[2] Most frequent antibiotics given with cefiderocol were tetracyclines 11/54 (20.4%) and trimethoprim-sulfamethoxazole 7/54 (13.0%).

CONCLUSIONS

In this cohort of patients infected by *S. maltophilia*, 70% of patients had respiratory tract infection. Patients with polymicrobial infections had similar clinical cure rates and lower mortality rates than patients with monomicrobial infections. Cefiderocol, given as empiric treatment or for a documented infection, resulted in higher clinical cure rates and lower mortality rates than when given as salvage treatment. Cefiderocol in monotherapy resulted in numerically higher clinical cure rates than in combination therapy in the current cohort.